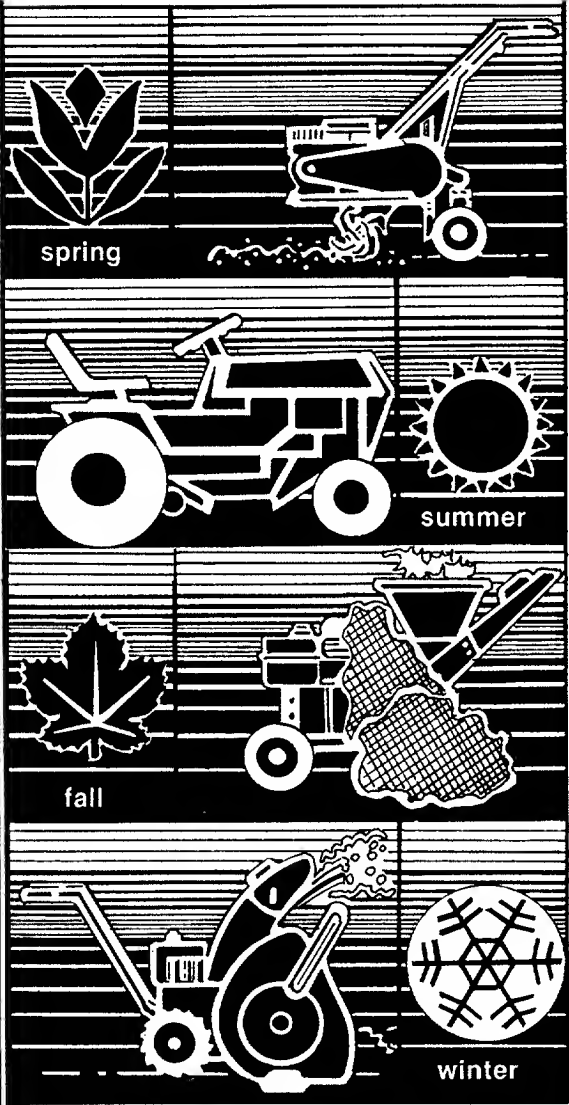


OWNER'S GUIDE

OUTDOOR POWER EQUIPMENT
for all seasons



600 SERIES TRANSMATIC LAWN TRACTORS

Model Numbers

135-618-000
135-620-000
135-638-000
135-668-000
135-688-000
135-698-000

Important:

**Read Safety Rules and
Instructions Carefully**

Thank you for purchasing
an American-built product.

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Instructions given with this symbol are for personal safety. Be sure to follow them.

LIMITED WARRANTY

For one year from the date of original retail purchase, MTD PRODUCTS INC will either repair or replace, at its option, free of charge, F.O.B. factory or authorized service firm, any part or parts found to be defective in material or workmanship. Transportation charges for the movement of any power equipment unit or attachment are the responsibility of the purchaser. Transportation charges for any parts submitted for replacement under this warranty must be paid by the purchaser unless such return is requested by MTD PRODUCTS INC.

This warranty will not apply to any part which has become inoperative due to misuse, excessive use, accident, neglect, improper maintenance, alterations, or unless the unit has been operated and maintained in accordance with the instructions furnished. This warranty does not apply to the engine, motor, battery, battery charger or component parts thereof. Please refer to the applicable manufacturer's warranty on these items.

This warranty will not apply where the unit has been used commercially.

Warranty service is available through your local authorized service dealer or distributor. If you do not know the dealer or distributor in your area, please write to the Customer Service Department of MTD.

The return of a complete unit will not be accepted by the factory unless prior written permission has been extended by MTD.

This warranty gives you specific legal rights. You may also have other rights which vary from state to state.



WARNING

This unit is equipped with an internal combustion engine and should not be used on or near any unimproved forest-covered, brush-covered or grass-covered land unless the engine's exhaust system is equipped with a spark arrester meeting applicable local or state laws (if any). If a spark arrester is used, it should be maintained in effective working order by the operator.

In the State of California the above is required by law (Section 4442 of the California Public Resources Code). Other states may have similar laws. Federal laws apply on federal lands. A spark arrester muffler is available at your nearest engine authorized service center.



WARNING

To reduce the potential for any injury, comply with the following safety instructions. Failure to comply with the instructions may result in personal injury.

SAFE OPERATION PRACTICES FOR RIDING VEHICLES

1. Read this owner's manual carefully in its entirety before attempting to assemble or operate this unit. Keep this manual in a safe place for future and regular reference and for ordering replacement parts.
2. This unit is a precision piece of power equipment, not a plaything. Therefore exercise extreme caution at all times.
3. Know the controls and how to stop quickly—READ THIS OWNER'S MANUAL.
4. Do not allow children to operate vehicle. Do not allow adults to operate it without proper instruction. Only persons well acquainted with these rules of safe operation should be allowed to use your mower.
5. No one should operate this unit while intoxicated or while taking medication that impairs the senses or reactions.
6. Wear sturdy, rough-soled work shoes and close-fitting slacks and shirts to avoid entanglement in the moving parts. Never operate a unit in bare feet, sandals, or sneakers.
7. To prevent injury, do not carry passengers or give rides. Keep children, pets and bystanders out of the area while mowing. Only the operator should ride on the unit and only ride in the seat.
8. Check overhead clearance carefully before driving under power lines, guy wires, bridges or low hanging tree branches, before entering or leaving buildings, or in any other situation where the operator may be struck or pulled from the unit, which could result in serious injury.
9. To maintain control of the unit and reduce the possibility of upset or collision, operate the tractor smoothly. Avoid erratic operation and excessive speed.
10. Keep the area of operation clear of all persons, particularly small children and pets. Stop engine when they are in the vicinity of your mower. Although the area of operation should be completely cleared of foreign objects, a small object may have been overlooked and could be accidentally thrown by the mower in any direction and cause injury.
11. Clear work area of objects which might be picked up and thrown by the mower in any direction and cause injury.
12. Stop the blade(s) when crossing gravel drives, walks or roads.
13. Disengage all attachment clutches and shift into neutral before attempting to start engine.
14. Disengage power to attachment(s) and stop engine before leaving operating position.
15. Do not put hands or feet near or under rotating parts. Keep clear of the discharge opening at all times as the rotating blade(s) can cause injury.
16. Disengage power to attachment(s) and stop engine before making any repairs or adjustments. Disconnect the spark plug wire and keep the wire away from the plug to prevent accidental starting.
17. Before attempting to unclog the mower or discharge chute, stop the engine. The mower blade(s) may continue to rotate for a few seconds after the engine is shut off. Therefore, be sure the blade(s) have stopped completely. Disconnect the spark plug wire and keep the wire away from the plug to prevent accidental starting.
18. Disengage power to attachment(s) when transporting or not in use.
19. Take all possible precautions when leaving vehicle unattended such as disengaging power-take-off, lowering attachments, shifting into neutral, setting parking brake, stopping engine and removing key.
20. Do not stop or start suddenly when going uphill or downhill. Mow up and down face of steep slopes; never across the face. Use extreme caution if it is necessary to drive the tractor up an incline or back the tractor down an incline because the front of the tractor could lift and rapidly flip over backward which could cause serious injury.
21. Reduce speed on slopes and in sharp turns to prevent tipping or loss of control. Always keep the tractor in gear when going down steep hills to take advantage of engine braking action.
22. Stay alert for holes in terrain and other hidden hazards.
23. Use care when pulling loads or using heavy equipment.
 - A. Use only approved drawbar hitch points.
 - B. Limit loads to those you can safely control.
 - C. Do not turn sharply. Use care when backing.
 - D. Use counterweight(s) or wheel weights when suggested in owner's manual.
24. Watch out for traffic when crossing or near roadways.
25. When using any attachments, never direct discharge of material toward bystanders nor allow anyone near vehicle while in operation.
26. Handle gasoline with care. It is highly flammable.
 - A. Use approved gasoline container.
 - B. Never remove cap or add gasoline to a running or hot engine or fill fuel tank indoors. Wipe up spilled gasoline.
 - C. Open doors if engine is run in garage. Exhaust fumes are dangerous. Do not run engine indoors.

27. Keep the vehicle and attachments in good operating condition, and keep safety devices in place. Use guards as instructed in operator's manual.
28. Keep all nuts, bolts, and screws tight to be sure the equipment is in safe working condition.
29. Never store the equipment with gasoline in the tank inside a building where fumes may reach an open flame or spark. Allow engine to cool before storing in any enclosure.
30. To reduce fire hazard, keep engine free of grass, leaves or excessive grease.
31. The vehicle and attachments should be stopped and inspected for damage after striking a foreign object. The damage should be repaired before restarting and operating the equipment.
32. Do not change the engine governor settings or overspeed the engine.
33. When using the vehicle with mower, proceed as follows:
 - (1) Mow only in daylight or in good artificial light.
 - (2) Never make a cutting height adjustment while engine is running if operator must dismount to do so.
 - (3) Shut the engine off and wait until the blade comes to a complete stop before removing the grass catcher.
 - (4) Check blade mounting bolts for proper tightness at frequent intervals.
34. Check grass catcher bags frequently for wear or deterioration. For safety protection, replace only with new bag meeting original equipment specifications.
35. Look behind to make sure the area is clear before placing the transmission in reverse and continue looking behind while backing up. Disengage blades before shifting into reverse and backing up.
36. This unit should not be driven up a ramp onto a trailer or truck under power, because the unit could tip over, causing serious personal injury. The unit must be pushed manually to load properly.



NOTE

This unit is shipped WITHOUT GASOLINE or OIL. After assembly, see separate engine manual for proper fuel and engine oil recommendations.

ASSEMBLY

This owner's manual covers various models of lawn tractors. The units illustrated may vary slightly from your unit. Follow the instructions which pertain to your unit.



NOTE

Reference to right hand or left hand side of machine is from the driver's seat facing forward.

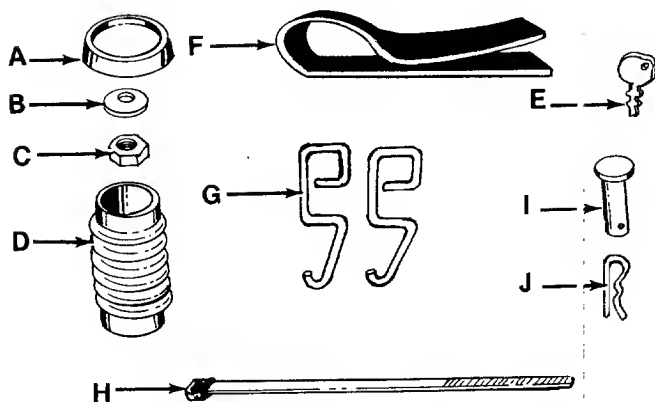


FIGURE 1.

Contents of Hardware Pack: (See Figure 1)

- A (1) Steering Wheel Cap
 - B (1) Belleville Washer
 - C (1) Hex Nut 5/16-18 Thread
 - D (1) Steering Bellow
 - E (2) Ignition Keys
 - F (1) Battery Strap
 - G (2) Battery Strap Hooks
 - H (1) Cable Tie
 - I (1) Clevis Pin
 - J (1) Hairpin Cotter
- Hardware for Mounting the Seat (Not Shown)
- (2) Hex Bolts and Lock Washers
 - or
 - (1) Hex Nut and Lock Washer

Loose Parts in Carton:

- (1) Battery Pack
- (1) Steering Wheel
- (1) Seat

BATTERY INFORMATION



- A. Battery acid must be handled with great care as contact with it can burn and blister the skin. It is also advisable to wear protective clothing (goggles, rubber gloves and apron) when working with it.*
- B. Should battery acid accidentally splatter into the eyes or onto the face, rinse the affected area immediately with clean cold water. If there is any further discomfort, seek prompt medical attention.
- C. If acid spills on clothing, first dilute it with clean water, then neutralize with a solution of ammonia/water or baking soda/water.

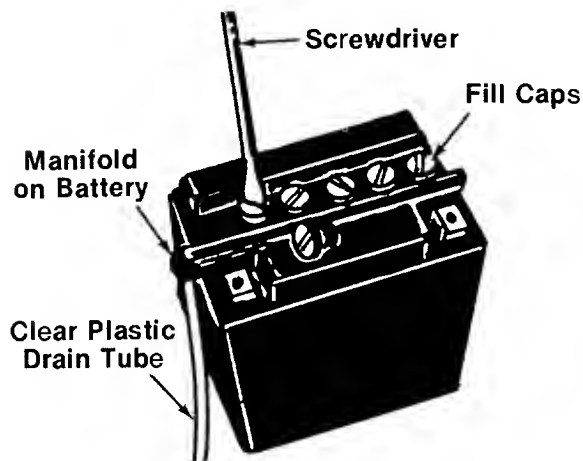


FIGURE 2.

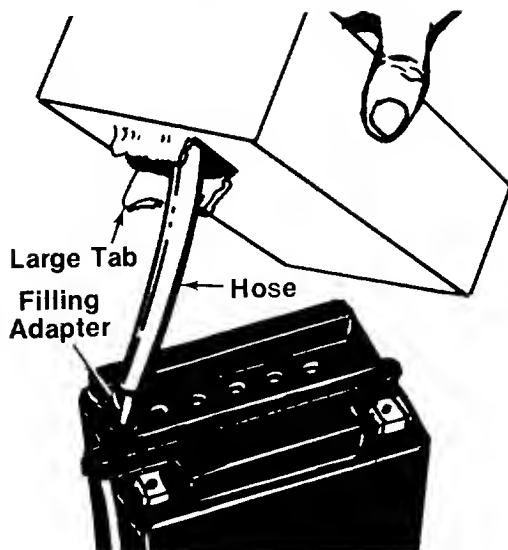


FIGURE 3.

- D. Since battery acid is corrosive, do not pour it into any sink or drain. Before discarding empty electrolyte containers, rinse them with a neutralizing solution.
- E. NEVER connect or disconnect charger clips to battery while charger is turned on as it can cause sparks.
- F. Keep all lighted materials (cigarettes, matches, lighters) away from the battery as the hydrogen gas generated during charging can be combustible.
- G. As a further precaution, only charge the battery in a well-ventilated area.

***Always shield eyes, protect skin and clothing when working near batteries.**

ACTIVATING AND INSTALLING THE BATTERY

- 1. Upon opening the battery pack, you should receive acid pack, battery, drain tube, filling adapter and hardware.



BATTERIES CONTAIN SULFURIC ACID AND MAY CONTAIN EXPLOSIVE GASES (when electrolyte has been added).

- 2. Place the battery on table or workbench to be filled.
- 3. Place one end of clear plastic drain tube on manifold of battery. See figure 2.



NOTE
Some batteries may already have the drain tube installed, in which case it may be necessary to snip off the sealed end.

- 4. Remove the six fill caps from the top of the battery with a screwdriver. Care should be taken not to damage the fill caps. See figure 2.
- 5. Lay acid package down, with "push in" facing up. Using thumb, push in small perforated tab at dot on front of package. Tear down large tab to solid line, exposing hose. **Do not** use any sharp object to open acid package.
- 6. Pull out hose from package and hold upright. Squeeze hose forcing all acid back into package. Cut off tip of hose and insert filling adapter. See figure 3.
- 7. Fill each cell to upper level marked on front of battery. Replace fill caps on battery. See figure 3.



Battery contains sulfuric acid. Refer to warning on page 5. Antidote: EXTERNAL—Flush with water. INTERNAL—Drink large quantities of water or milk. Follow with milk of magnesia, beaten egg or vegetable oil. Seek prompt medical attention. EYES: Flush with cool water for at least 15 minutes, then seek immediate medical attention.

Since batteries produce explosive gases, keep all lighted materials (cigarettes, lighters, matches, etc.) away. Be sure to charge battery only in well-ventilated areas.

**KEEP BATTERIES
OUT OF THE REACH OF CHILDREN!**

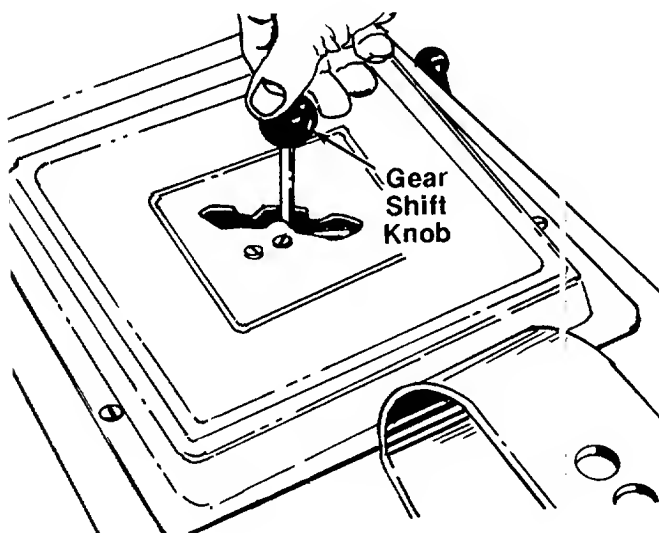


FIGURE 4.

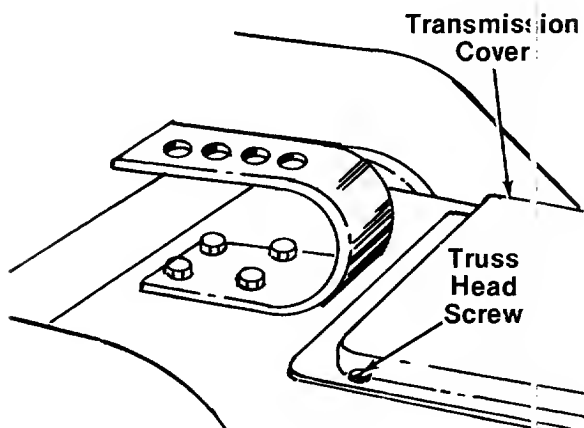


FIGURE 5.

8. Allow battery to sit for 20 to 30 minutes. Add additional acid, if necessary, to bring it up to the proper level.
9. The battery can be charged after the 20 minutes sitting period. **SLOW CHARGE THE BATTERY (DO NOT FAST CHARGE)** at a maximum bench rate of 1.4 amperes until the specific gravity reading is 1.260-1.280. Charge for a minimum of 2 hours and a maximum of 8 hours.

NOTE

Charging rate after battery has been put into operation: The battery is to be charged for a period of 14-16 hours. **NO LONGER THAN 30 HOURS.**

After battery has been in service, add only distilled water. Do not add acid.

NOTE

This engine is equipped with an alternator. The current for the battery charger alternator is unregulated. During normal operation, it is only necessary to charge the battery:

1. When it is activated for the first time.
2. Before winter storage.
3. Before using the lawn tractor after winter storage.

INSTALLING THE BATTERY

1. Place gear shift lever in the "neutral" position. Unscrew the gear shift knob. See figure 4.

2. Remove the two truss head screws which secure the transmission cover. See figure 5.



FIGURE 6.

3. Lift the transmission cover. Unplug the green safety wire from beneath the transmission cover. See figure 6. Remove transmission cover.

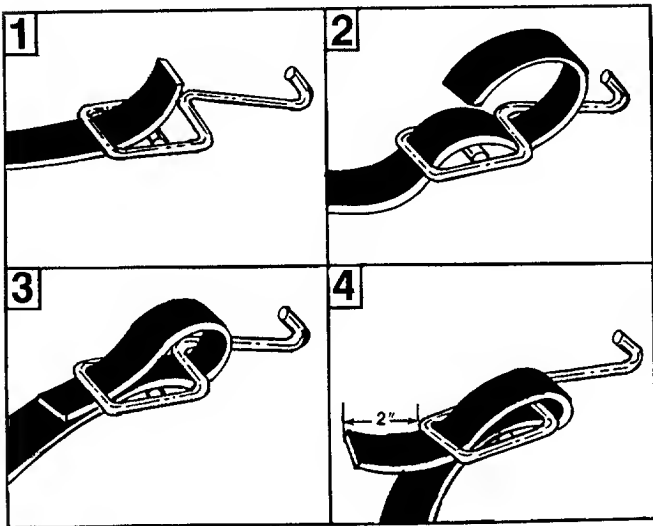


FIGURE 7.

4. Assemble one hook (G) to each end of the battery strap (G) as shown in figure 7. Adjust the strap so there is about 2" of strap beyond the hooks.

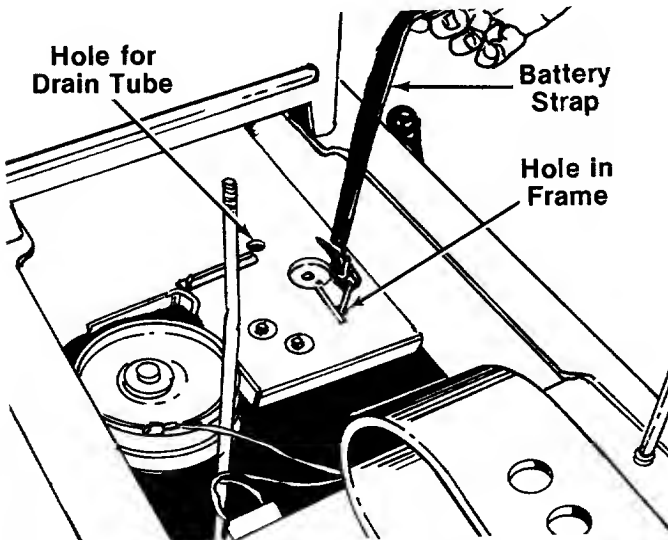


FIGURE 8.

5. Hook one end of the battery strap into the hole provided in the frame. See figure 8. Lay the strap over the side of the frame.

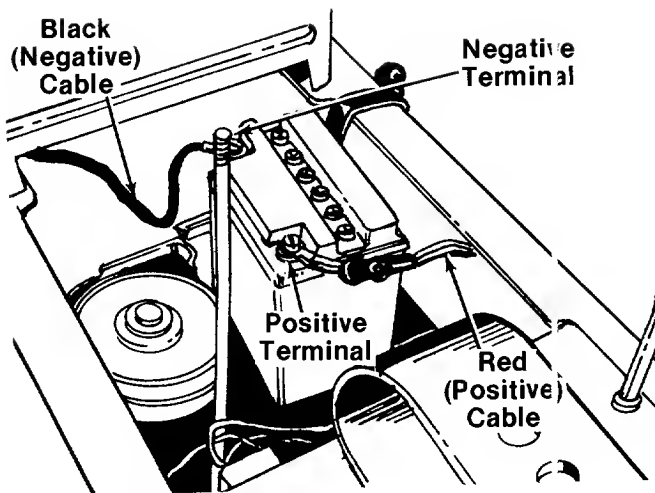


FIGURE 9.

6. Set the battery in the lawn tractor so that the negative terminal is toward the front of the unit. See figure 9. Place the end of the drain tube into the hole in the frame shown in figure 8.
7. Slide the square nut (provided with battery hardware) into the positive (+) terminal. Place the positive (heavy red wire) cable on the positive terminal. Secure with screw provided. See figure 9.
8. Slide the square nut (provided with battery hardware) into the negative (-) terminal. Place the negative (heavy black wire) cable on the negative terminal. Secure with screw provided.

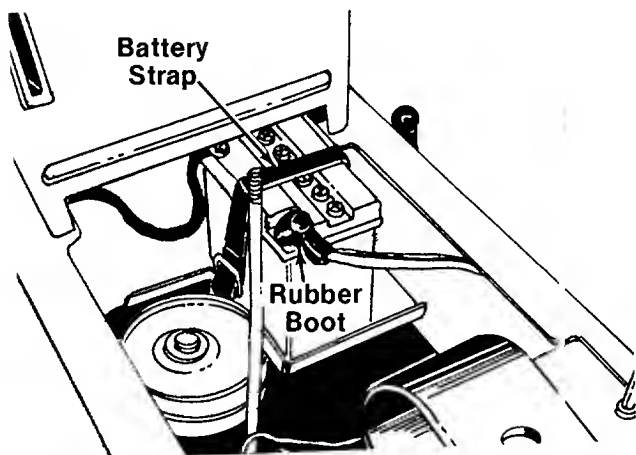


FIGURE 10.

9. Slide the battery forward into position as shown in figure 10. Secure in place with the battery strap, stretching strap over the battery and hooking into hole in the frame.
10. Slide rubber boot over the positive terminal. See figure 10.

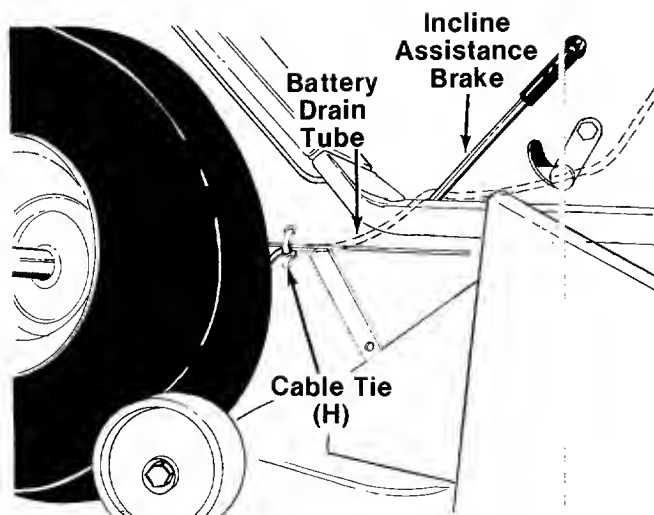


FIGURE 11.

11. Route the battery drain tube toward the back of the unit, over the shaft on the incline assistance brake and inside the deck links. See figure 11.
12. Secure drain tube to hole in the side of frame with cable tie (H) as shown in figure 11. Cut off excess end of cable tie. Be certain tube is routed away from wheel rim.
13. Plug the green safety wire into the switch beneath the transmission cover. Refer to figure 6. Replace the transmission cover and gear shift knob.

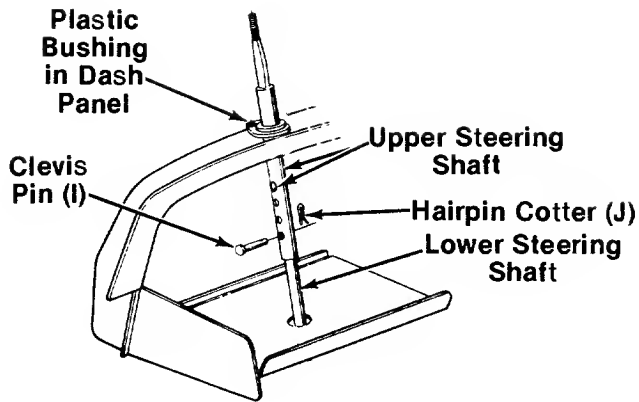


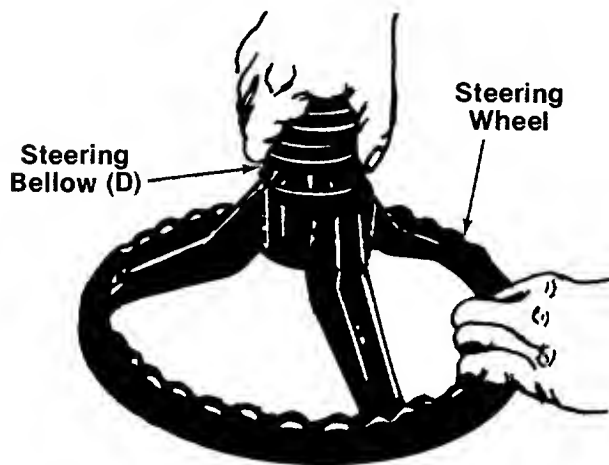
FIGURE 12.—Model 698 Shown

STEERING WHEEL INSTALLATION

1. For shipping purposes, the upper steering shaft is pushed all the way down over the lower steering shaft. Pull the upper steering shaft up. The four holes in the shaft provide four steering wheel heights. Select desired hole and secure with clevis pin (I) and hairpin cotter (J). See figure 12.

NOTE

On model 668, the four adjustment holes are located above the dash panel.



2. Attach steering bellow (D) to the steering wheel as shown in figure 13.

NOTE

One end of the steering bellow is slightly larger than the other. The larger end must be assembled to the steering wheel.

FIGURE 13.

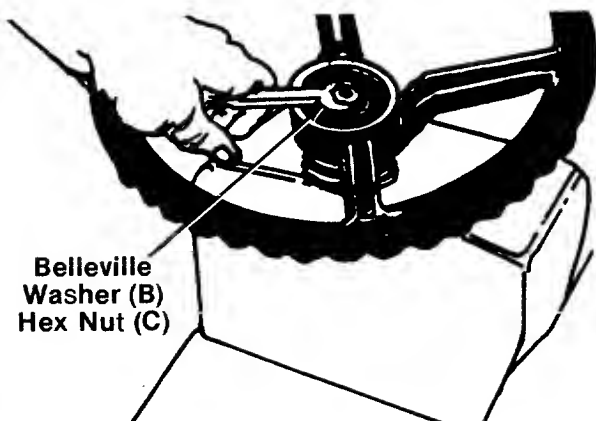


FIGURE 14.

3. Place steering wheel and bellow on the steering shaft, lining up the flats in the wheel with the flats on the shaft.
4. Secure with belleville washer (B) (cupped side against the steering wheel) and hex nut (C). See figure 14.
5. Press the steering wheel cap (A) on the steering wheel by hand.

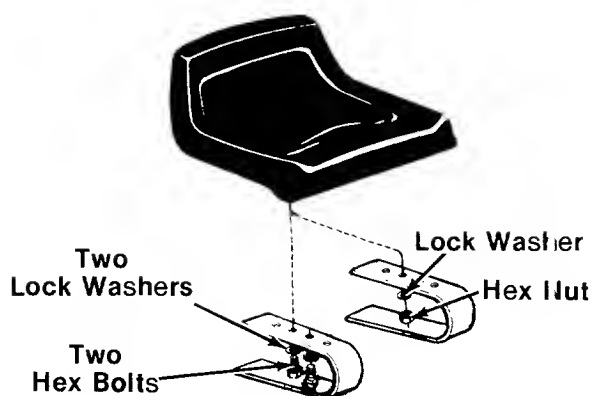


FIGURE 15.

SEAT INSTALLATION

Your seat mounts to the unit in one of two ways.

A. Two weld nuts in the bottom of the seat:

The seat may be adjusted to three different positions. Select desired position and secure to seat spring with two hex bolts and lock washers. See figure 15.

B. Weld bolt in the bottom of the seat:

The seat may be adjusted to four different positions. Select desired position and secure to seat spring with one lock washer and hex nut. See figure 15.

CONTROLS

THROTTLE CONTROL

The throttle control is used to regulate the engine speed and to activate the choke on the engine. To get maximum efficiency from cutting, the throttle should be in the FAST position when operating the mower. Pushing the throttle all the way forward past FAST, will choke the engine. See figure 16.

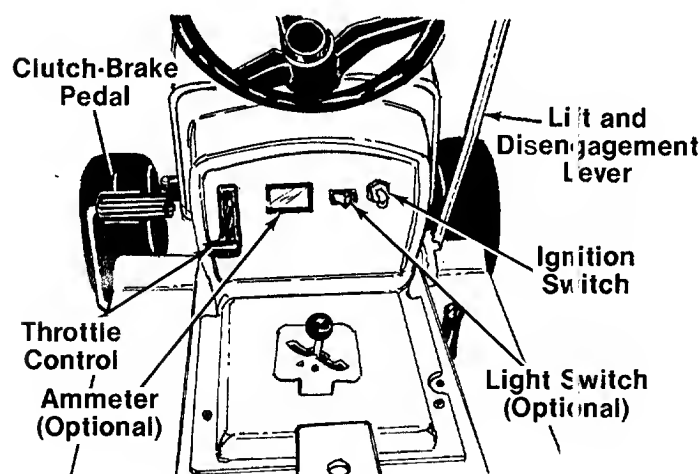


FIGURE 16.—Models 620, 638 and 698 Show/n

GEAR SHIFT LEVER

The shift lever is located on the left side of the console and has three positions, "FORWARD," "NEUTRAL" and "REVERSE." See figure 16. The clutch-brake pedal must be depressed and the lawn tractor must not be moving when shifting gears. Do not force the shift lever. Release the clutch-brake pedal slightly to line up the shifting collar in the transmission. Then try to shift gears.

SPEED CONTROL LEVER

The speed control lever allows you to regulate the ground speed of the lawn tractor. See figure 17. To select the ground speed, depress clutch pedal. Push speed control lever outward and move backward to slow lawn tractor, move forward to increase speed. When desired speed has been obtained, release lever in that position. Whenever clutch is engaged, unit will automatically go to the pre-set speed.

IGNITION SWITCH

Turn the key to the "START" position to start the engine. When the engine is running, let the key return to the "ON" position. To stop the engine, turn the key to the left to the "OFF" position and remove it to prevent accidental starting. See figure 16.

LIGHT SWITCH (Optional)

Push the light switch to turn on the lights. The lights will only operate when the engine is running. See figure 16.

AMMETER (Optional)

The ammeter registers the rate of battery charge or discharge. The ammeter will register on the discharging side when starting the engine. It should register on the opposite side (charging) when the engine is running in the fast position until the battery is completely charged. With a fully charged battery or with the engine idling, the ammeter will not show a charge. See figure 16.

CLUTCH-BRAKE PEDAL

The clutch-brake pedal is located on the left side of the lawn tractor. Depressing the clutch-brake pedal part way disengages the clutch. Pressing the pedal all the way down disengages the clutch and engages the disc brake. See figure 16.



NOTE

The clutch-brake pedal must be depressed to start the engine.

PARKING BRAKE

The speed control lever is used to set the parking brake. To set the parking brake, depress the clutch-brake pedal. Press the speed control lever outward and all the way to the rear of the unit. Release the speed control lever and the clutch-brake pedal.

To release the parking brake, depress the clutch-brake pedal, press the speed control lever outward and move to desired position. Release the speed control lever and the clutch-brake pedal.

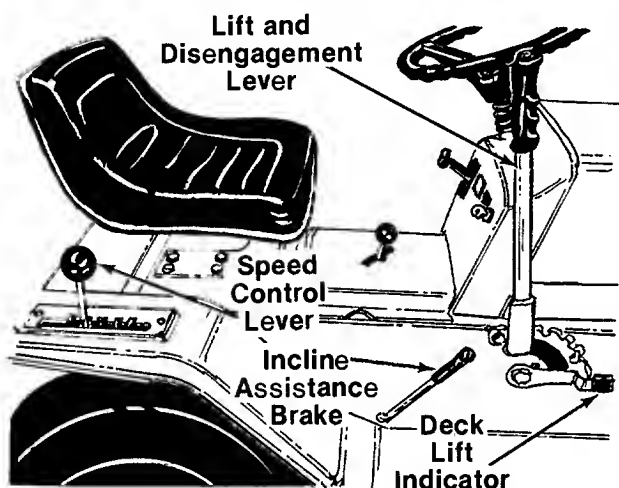


FIGURE 17.

INCLINE ASSISTANCE BRAKE

When stopping on a hill, hold the incline assistance brake lever back while you release the clutch-brake pedal until the lawn tractor begins to move, then release the lever. This lever permits smoother starts and clutch engagement by holding the tractor during the brake release/clutch engagement operation. See figure 17.

INTERLOCKS (Not Shown)

Interlock safety switches are located on the clutch-brake pedal, and the lift and disengagement lever and gear shift lever.

Before the engine will start, the clutch-brake pedal must be depressed all the way and the lift and disengagement lever must be in the disengaged position.

Before the unit can be shifted into reverse, the lift and disengagement must be in the disengaged position.

CUTTING CONTROLS

A. LIFT AND DISENGAGEMENT LEVER

The lift and disengagement lever is used to raise and lower the cutting deck. Pulling it all the way back and locking it disengages the blades. The lift and disengagement lever must be in the disengaged position when starting the engine and when shifting into reverse. See figure 17.

B. DECK LIFT INDICATOR

The deck lift indicator marks the position being used for the lift lever. Select the lift lever position desired, press the indicator lever outward, move it to the position immediately below the lift lever and release the indicator lever. See figure 17.

C. WHEEL HEIGHT ADJUSTER

Move the lever towards the wheel and set it in the desired height. See figure 18.

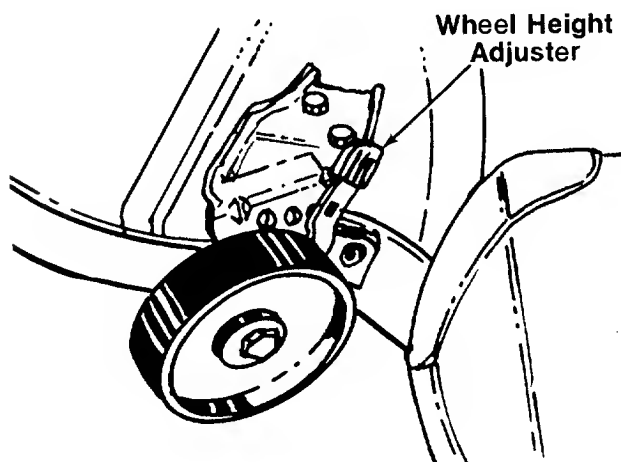


FIGURE 18.

D. SETTING THE CUTTING HEIGHT

1. Select the position for the lift lever which gives the desired cutting height. Move the deck lift indicator so that the lift lever can be returned to the same position after it is raised.
2. Set the wheel height adjusters on the deck so that the wheels are $\frac{1}{4}$ to $\frac{1}{2}$ inch above the ground.

OPERATION



CAUTION

1. Keep all shields in place.
2. Before leaving operator's position:
 - a. Shift transmission to neutral
 - b. Set parking brake
 - c. Disengage attachment clutch
 - d. Shut off engine
 - e. Remove ignition key
3. Wait for all movement to stop before servicing machine.
4. Keep people and pets a safe distance away from machine.
5. Look to the rear before backing up.

TIRE PRESSURE

For shipping purposes, the tires on your unit may be over-inflated. Tire pressure should be reduced before unit is put into operation. Recommended operating tire pressure should be 10 p.s.i.

Check sidewall of tire for manufacturer's maximum tire pressure. If this information does not appear on your tire, maximum tire pressure under any circumstances is 30 p.s.i. Equal tire pressure should be maintained on all tires.

STARTING THE ENGINE



NOTE

To open the hood, simply lift up on both sides of the hood on all models except 668.

1. Service the engine with oil and gasoline as described in the engine manual.
2. Depress the clutch-brake pedal and set the parking brake.
3. Place the lift and disengagement lever in the DISENGAGED position. See figure 17.



NOTE

This unit is equipped with a safety interlock system for your protection. The purpose of the safety interlock system is to prevent the engine from cranking or starting unless the clutch-brake pedal is depressed and the lift and disengagement lever is in the disengaged position. In addition, the lift and disengagement lever must be in the disengaged position when the unit is put into reverse or the engine will shut off.



WARNING

Do not operate the lawn tractor if the interlock system is malfunctioning because it is a safety device, designed for protection.

4. Set the throttle control in the CHOKE position. See figure 16.
5. Turn the ignition key to the "START" position. When the engine is running, let the key return to the "ON" position. See figure 16.
6. Move the throttle control to desired engine speed.

STOPPING THE ENGINE

Turn the ignition key to the left to the "OFF" position. Remove the key to prevent accidental starting.



NOTE

A brief break-in period is essential to ensure maximum engine and mower life. The break-in consists of running the engine at half speed for a period of time required to use one tank of gasoline. It is also recommended to change crankcase oil after the first 5 hours of operation.

Be sure that the lawn is clear of stones, sticks, wire, or other objects which could damage lawn tractor or engine. For best results and to insure more even grass distribution, do not mow when lawn is excessively wet.



IMPORTANT

If you strike a foreign object, stop the engine. Remove wire from spark plug, thoroughly inspect the unit for any damage, and repair the damage before restarting and operating the mower.

OPERATING THE LAWN TRACTOR

1. Set the desired cutting height.
2. Start the engine as instructed in previous column.
3. Move throttle control to $\frac{3}{4}$ or full throttle to prevent strain on the engine and to operate the cutting blades.
4. Place the shift lever in either the "FORWARD" or "REVERSE" position.



CAUTION

Look to the rear before backing up.

5. Release the parking brake by depressing the clutch-brake pedal, pressing outward on the speed control lever and moving to desired position.



NOTE

Use first speed position when operating the lawn tractor for the first time.

6. Release clutch-brake pedal slowly to put unit into motion.
7. The lawn tractor is brought to a stop by depressing the clutch-brake pedal.



CAUTION

If the unit is not to be used for a long period, place the gear shift lever in NEUTRAL, stop the engine, set the parking brake and remove the key. DO NOT leave the machine on an incline.

OPERATING THE CUTTING BLADES

The cutting blades may be engaged while the lawn tractor is moving or standing still. DO NOT engage the cutting blades abruptly as the sudden belt tension on the pulley may cause the engine to stall.



WARNING

When the blade drive is engaged, keep feet and hands away from the discharge opening, the blades or any part of the deck.

Move the lift and disengagement lever into the DISENGAGED position to raise the deck and disengage the blades.



NOTE

When the machine is used for other than mowing operations, the blade drive should be disengaged.

GRASS CATCHERS are available as optional equipment for the lawn tractors shown in this manual.

Model 015 for 34" and 38" Side Discharge Decks
 Model 038 for 30" Rear Discharge Deck
 Model 058 for 36" Rear Discharge Deck



WARNING

The mower should not be operated without the entire grass catcher or chute deflector in place.



NOTE

Under normal usage bag material is subject to wear, and should be checked periodically. Be sure any replacement bag complies with the mower manufacturer's recommendations.

For replacement bags, use only factory authorized replacement bag.

ADJUSTMENTS

SEAT ADJUSTMENT

The seat may be adjusted to one of several positions. Refer to seat installation section of assembly instructions.

STEERING WHEEL ADJUSTMENT

There are four height positions for the steering wheel. To adjust the height of the steering wheel, remove the hairpin cotter and clevis pin on the steering shaft. Place the steering wheel in the position desired and secure with hairpin cotter and clevis pin. Refer to figure 12.

SPEED CONTROL ADJUSTMENT (See figure 19)

First, adjust the speed control lever by pushing the clutch-brake pedal forward until the stop on the speed control rod is against the running board rod. See figure 19. Have another person hold the pedal in this position as you make the following adjustment. Place the speed control lever in parking brake position. Remove the hairpin cotter and flat washer, and adjust the ferrule on the rod so it is against the back end of the slot. See figure 19. Replace the flat washer and hairpin cotter.

Next, adjust the speed control link as follows to obtain the correct neutral adjustment.

1. Start the engine.
2. Place the shift lever in Neutral position.
3. Place the speed control lever in high speed position.
4. Release the clutch-brake pedal completely, then slowly depress the pedal all the way (to park position). Hold the pedal in this position.
5. Turn the engine off.

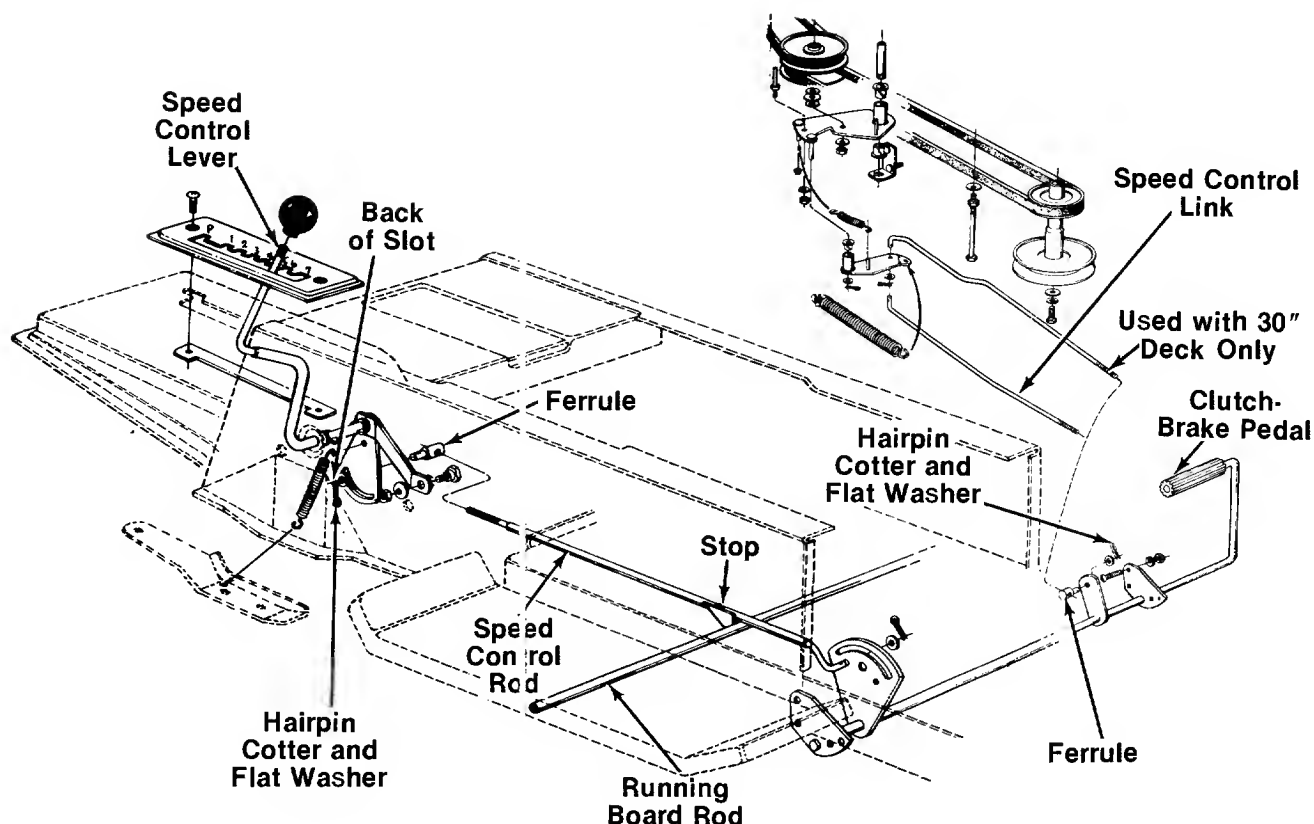


FIGURE 19.

6. After engine stops completely, release the clutch-brake pedal.
7. Position speed control lever as follows.
 - A. 7-speed units—Place speed control lever in second position.
 - B. 6-speed units—Place speed control lever between first and second position (hold in this position).
 - C. 4 and 5-speed units—Place speed control lever in first position.
8. Remove the hairpin cotter and flat washer from the ferrule on the speed control link.
9. Push the clutch-brake pedal backward by hand as far as it will go using light pressure and hold it in this position as you adjust the ferrule on speed control link to line up with the hole in clutch-brake pedal.
10. Secure with flat washer and hairpin cotter.

WHEEL ADJUSTMENT

The caster (forward slant of the king pin) and the camber (tilt of the wheels out at the top) require no adjustment. Automotive steering principles have been used to determine the caster and camber on the tractor. The front wheels should toe-in 1/8 inch.

To adjust the toe-in, follow these steps.

1. Remove the hex nut and lock washer, and drop the tie rod end from the wheel bracket. See figure 20.
2. Loosen the hex jam nut on tie rod.
3. Adjust the tie rod assembly for correct toe-in.

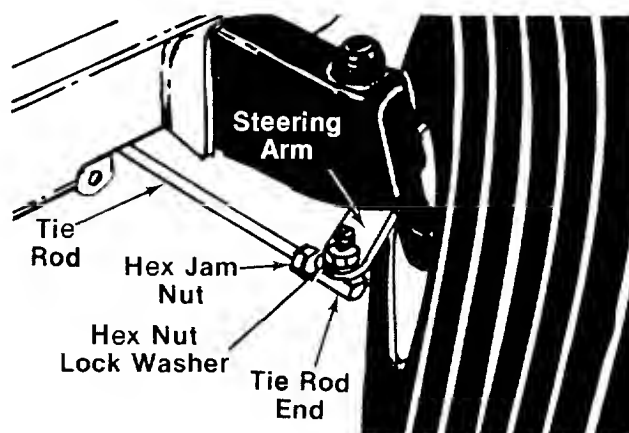


FIGURE 20.

Dimension "B" should be approximately 1/8" less than Dimension "A." See figure 21.

- A.) To increase Dimension "B," screw tie rod into tie rod end.

- B.) To decrease Dimension "B," unscrew tie rod from tie rod end.
- C.) Reassemble tie rod. Check dimensions. Readjust if necessary.

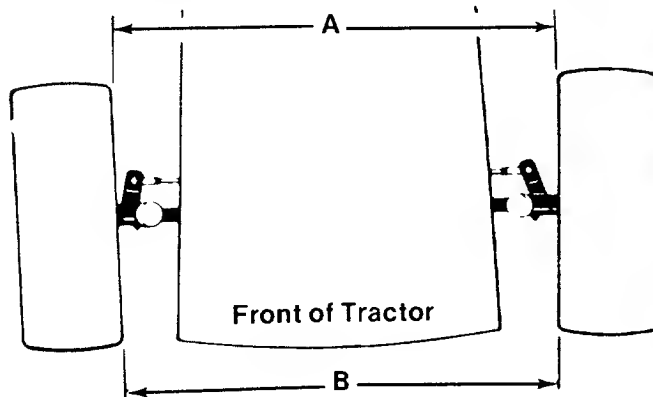


FIGURE 21. TOE-IN DIAGRAM

CARBURETOR ADJUSTMENT



WARNING

If any adjustments are made to the engine while the engine is running (e.g. carburetor), disengage all clutches, and blades. Keep clear of all moving parts. Be careful of heated surfaces and muffler.

Minor carburetor adjustment may be required to compensate for differences in fuel, temperature, altitude and load. To adjust the carburetor, refer to the separate engine manual packed with your unit.

BRAKE ADJUSTMENT (See figure 22)

The brake is located by the right rear wheel inside the frame. During normal operation of this machine, the brake is subject to wear and will require periodic examination and adjustment.



CAUTION

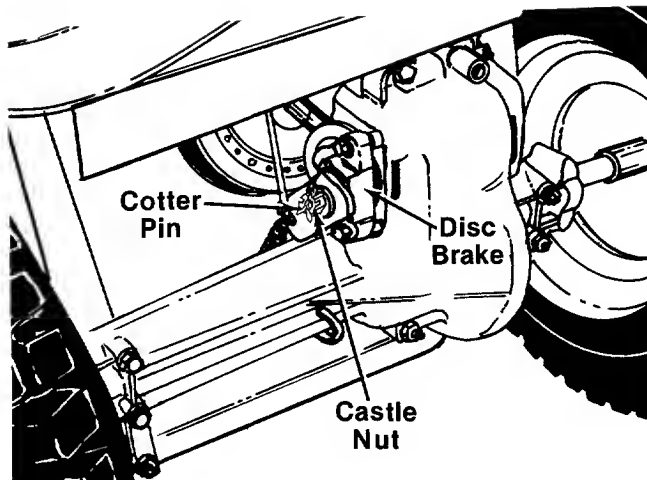
Do not have the engine running when you adjust the brake.

To adjust the brake, remove the cotter pin. Adjust the castle nut so the brake starts to engage when the brake lever is $\frac{1}{4}$ " to $\frac{5}{16}$ " away from the axle housing.



NOTE

Figure 22 is shown with the unit tipped up on rear wheels for clarity only.



**FIGURE 22.
DECK ADJUSTMENT LINK**

If an uneven cut is obtained, the deck may be adjusted. An adjustable lift link assembly is located on the left side of the unit. Refer to Ref. Nos. 5, 18 and 19 on page 33.

To adjust the deck, loosen the two hex nuts on the adjustable link lift assembly. Thread the hex nuts up or down the adjustable link lift assembly as necessary. Retighten the hex nuts.

LUBRICATION

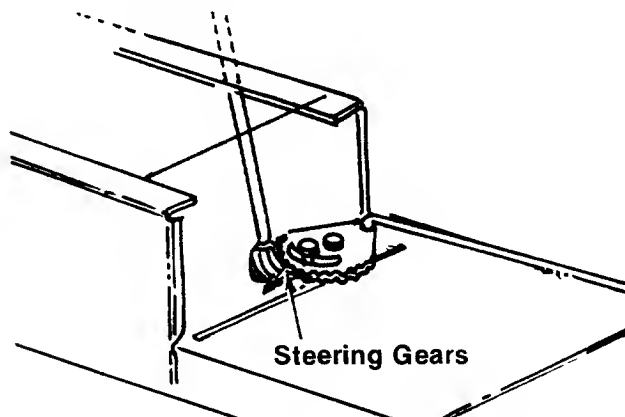


WARNING

Always stop engine and disconnect spark plug wire before cleaning, lubricating or doing any kind of work on lawn tractor.

STEERING GEARS

Lubricate teeth of steering gears with automotive multi-purpose grease after every 25 hours of operation or once a season. See figure 23.



**FIGURE 23.
STEERING SHAFT**

Lubricate steering shaft at least once a season with light oil.

TRANSAXLE

The transaxle is lubricated and sealed at the factory and does not require checking. If disassembled for any reason, lubricate with 10 oz. of grease, part number 737-0148.

FRONT WHEELS

The front wheels are provided with grease fittings. Lubricate at least once a season with automotive multi-purpose grease.

PIVOT POINTS

Lubricate all pivot points with light oil at least once a season.

MAINTENANCE



Disconnect the spark plug wire and ground it against the engine. Block the wheels of the unit.

CRANKCASE OIL

Check the oil level in the crankcase before each use of the machine and after every five hours of operation. Oil level should be maintained as instructed in the separate engine manual.

After the first five hours of operating a new engine, drain the oil from the crankcase while engine is still hot and refill crankcase with new oil; thereafter change the oil every 25 hours of operation. Refer to the engine manual.

AIR CLEANER

Under normal operating conditions, the air cleaner, located on top of the carburetor, must be serviced after every ten hours of use. Under extremely dusty operating conditions, the air cleaner must be serviced after every hour of operation. To service the air cleaner, refer to the separate engine manual packed with your unit.

CLEANING ENGINE AND BLADE HOUSING

Any fuel or oil spilled on the machine should be wiped off promptly. Grass, leaves, and other dirt must not be left to accumulate around the cooling fins of the engine or on any part of the machine.

Clean the underside of the blade housing after each mowing.

SPARK PLUG

The spark plug should be cleaned and the gap reset once a season. Spark plug replacement is recommended at the start of each mowing season; check engine manual for correct plug type and gap specification.

CUTTING BLADE

A. Removal for Sharpening or Replacement



Be sure to disconnect and ground the spark plug wire and remove ignition key before working on the cutting blade to prevent accidental engine starting.

1. Remove the large bolt and lock washer which holds the blade and adapter to the blade spindle.
2. Remove the blade and adapter from the spindle. Be careful not to lose the key on the spindle.
3. If the blade or blade adapter needs replacing, remove the two small bolts, lock washers and nuts which hold the blade to the adapter.

B. Sharpening

Remove the cutting blade by following the directions of the preceding section.

When sharpening the blade, follow the original angle of grind as a guide. It is **extremely important** that each cutting edge receives an equal amount of grinding to prevent an unbalanced blade. An unbalanced blade will cause excessive vibration when rotating at high speeds, may cause damage to the mower and could break, causing personal injury.

The blade can be tested for balance by balancing it on a round shaft screwdriver. Remove metal from the heavy side until it balances evenly.



It is recommended that the blade always be removed from the adapter for the best test of balance.

C. Reassembly

Before reassembling the blade and the blade adapter to the unit, lubricate the spindle and the inner surface of the blade adapter with light oil. Lubricating the bolt holes, bolts and inner surface of the nuts with light oil is also recommended. A 4 oz. plastic bottle of light oil lubricant is available. Order part number 737-0170. Engine oil may also be used.

When replacing the blade, be sure to install the blade with the side of the blade marked "Bottom" (or with part number) facing the ground when the mower is in the operating position. Make certain key is in place on the crankshaft.

Blade Mounting Torque

3/8" Dia. Bolt 375 in. lb. min., 450 in. lb. max.

5/16" Dia. Bolt 150 in. lb. min., 250 in. lb. max.

To insure safe operation of your unit, ALL nuts and bolts must be checked periodically for correct tightness.

FUEL FILTER

Your unit is equipped with a replaceable in-line fuel filter. Replace filter whenever contamination or discoloration is noticed. Order replacement filter through your engine authorized service dealer.

DRIVE BELT REMOVAL AND REPLACEMENT



WARNING

Disconnect the spark plug wire and ground it against the engine. Block the wheels of the unit.



NOTE

Figures 25 through 28 are shown with the unit tipped up for clarity. It is not necessary to tip the unit to remove the belts.

Rear Drive Belt

1. Remove the two truss head screws which secure the transmission cover. See figure 5.
2. Lift the transmission cover. Unplug the green safety wire from beneath the transmission cover. Refer to figure 6. Remove transmission cover.
3. Push the idler pulley toward the right side of the unit. Lift the belt over the idler pulley. See figure 24.
4. Remove the belt from the variable speed pulley.
5. Remove the two bolts which hold the shift lever bracket to the frame on the left side of the unit. Swing the bracket toward the right so the belt can be removed from the transmission pulley. See figure 24.
6. Replace belt, and reassemble in reverse order.

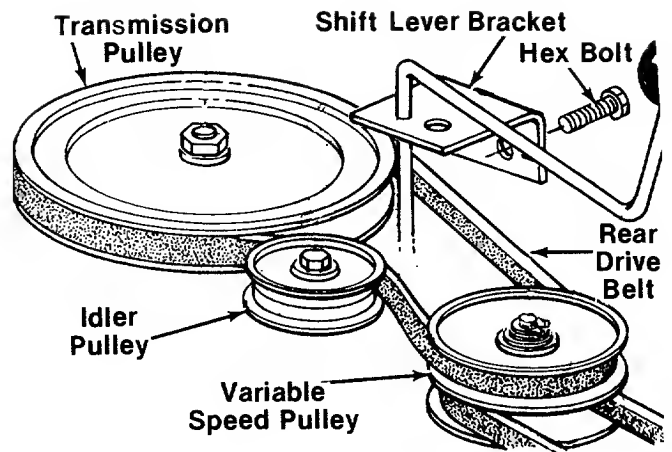


FIGURE 24.

Front Drive Belt

1. To remove the front drive belt, first remove the rear drive belt from the idler pulley and variable speed pulley.
2. Place the lift lever in the disengaged position.
3. Remove the three hex bolts (belt keepers) from the engine pulley belt guard. See figure 25.



NOTE

Make certain hex bolts are reassembled as shown in figure 25.

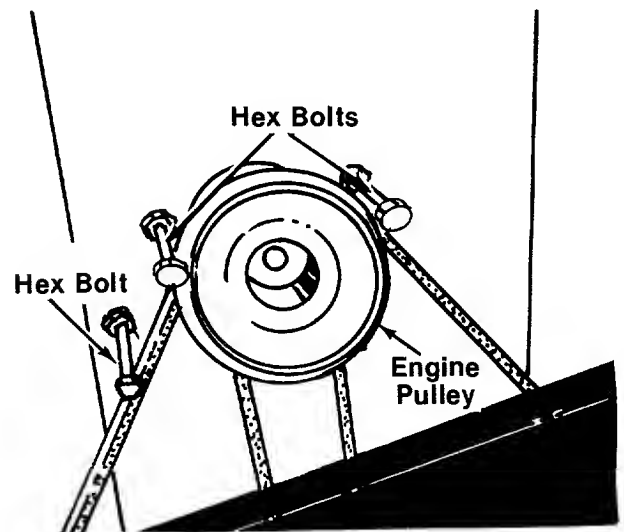


FIGURE 25.

4. Unhook the deck belt from the engine pulley.
5. Remove the two bolts, lock washers and nuts on each side of the frame which hold the engine pulley belt guard to the frame. See figure 26.

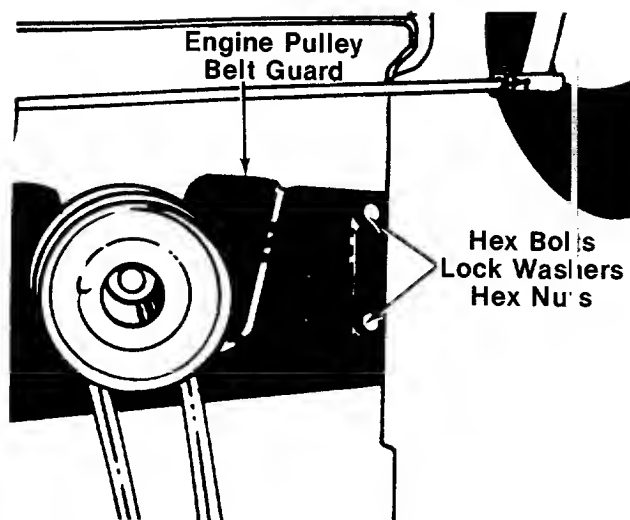


FIGURE 26.

6. Remove the engine pulley belt guard by slipping it back and to the right. See figure 27.

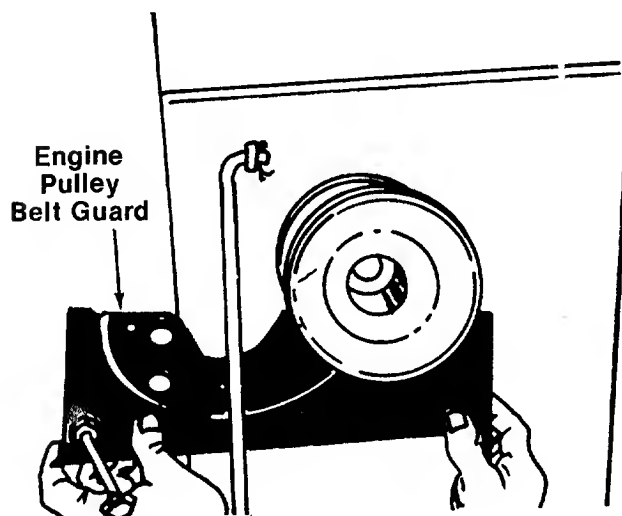


FIGURE 27.

7. Place the clutch-brake pedal in park position.
8. Push forward on the variable speed pulley, and lift the belt off the engine and remove the belt from the engine pulley.
9. Release the clutch-brake pedal. Using the pedal to move the variable speed pulley as necessary, lift the belt up and off the variable speed pulley.



NOTE

When reassembling, make certain belt is inside the pins. See figure 28.

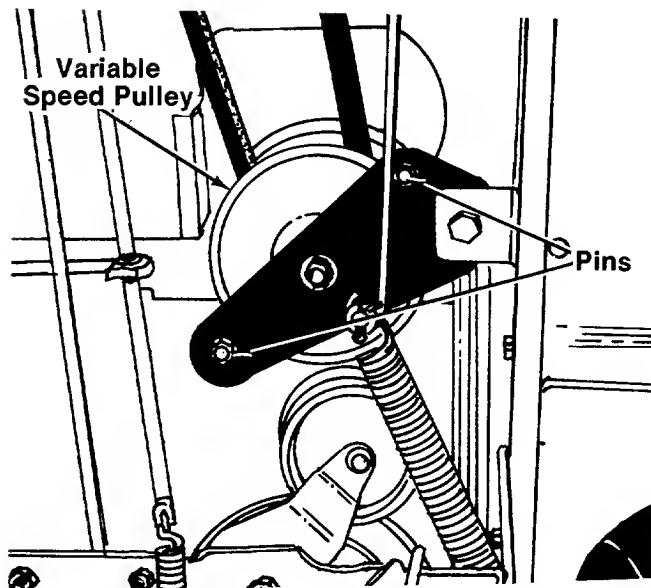


FIGURE 28.

10. Reassemble with a new belt, following instructions in reverse order.

BATTERY REMOVAL OR INSTALLATION



WARNING

When removing the battery, follow this order of disassembly to prevent the screwdriver from shorting against the frame.

1. Remove the Negative cable.
2. Remove the Positive cable.

To install a battery:

1. Attach the Positive cable.
2. Attach the Negative cable.

JUMP STARTING

1. Attach the first jumper cable from the Positive terminal of the good battery to the Positive terminal of the dead battery.
2. Attach the second jumper cable from the Negative terminal of the good battery to the FRAME OF THE UNIT WITH THE DEAD BATTERY.



WARNING

Failure to use this starting procedure could cause sparking, and the gas in either battery could explode.

BATTERY MAINTENANCE

1. Check periodically (every two weeks or before and after charging) to be sure electrolyte level is above the lowest line on battery. Add only distilled water or a good quality drinking water. **NEVER** add additional acid or other chemicals to battery after initial activation.
2. The battery should be checked with a hydrometer after every 25 hours of operation. If the specific gravity is less than 1.225, remove battery and recharge.
3. Coat the terminals and exposed wiring with a thin coat of grease or petroleum jelly for longer service and protection against electrolyte corrosion.
4. The battery should be kept clean. Any deposits of acid should be neutralized with soda and water. Be careful not to get this solution in the cells.

BATTERY STORAGE

1. Charge battery using normal methods. **NEVER** store discharged battery as it will not recover.
2. When storing battery for extended periods, disconnect battery cables. Removing battery from unit is recommended.
3. Store in cold, dry place.
4. Recharge battery whenever the specific gravity is less than 1.225, before returning to service, or every two months, whichever occurs first.

COMMON CAUSES FOR BATTERY FAILURE ARE:

1. Overcharging
2. Undercharging
3. Lack of water
4. Loose holds downs and/or corroded connections
5. Excessive loads
6. Battery electrolyte substitutes
7. Freezing of electrolyte



NOTE

THESE FAILURES DO NOT CONSTITUTE WARRANTY.

INSTALLATION OF TIRE TO RIM



The following procedure must be followed when removing or installing a tire to the rim.

1. Be sure rim is clean and rust free.
2. Lubricate both the tire and rim generously.
3. Never inflate to over 30 p.s.i. to seat beads. Excessive inflation pressure when seating beads may cause tire/rim assembly to burst with force sufficient to cause serious injury.

OFF-SEASON STORAGE

If the machine is to be inoperative for a period longer than 30 days, prepare for storage as follows.

1. Clean the engine and the entire unit thoroughly.
2. Lubricate all lubrication points. Wipe the entire machine with an oiled rag to protect the surfaces.
3. Refer to the engine manual for correct engine storage instructions. The engine must be completely drained of fuel to prevent gum deposits from forming on essential carburetor parts, fuel lines and fuel tanks.
4. Refer to battery storage instructions in previous column.
5. Store unit in a clean, dry area.



NOTE

When storing any type of power equipment in an unventilated or metal storage shed, care should be taken to rustproof the equipment. Using a light oil or silicone, coat the equipment, especially any chains, springs, bearings and cables.

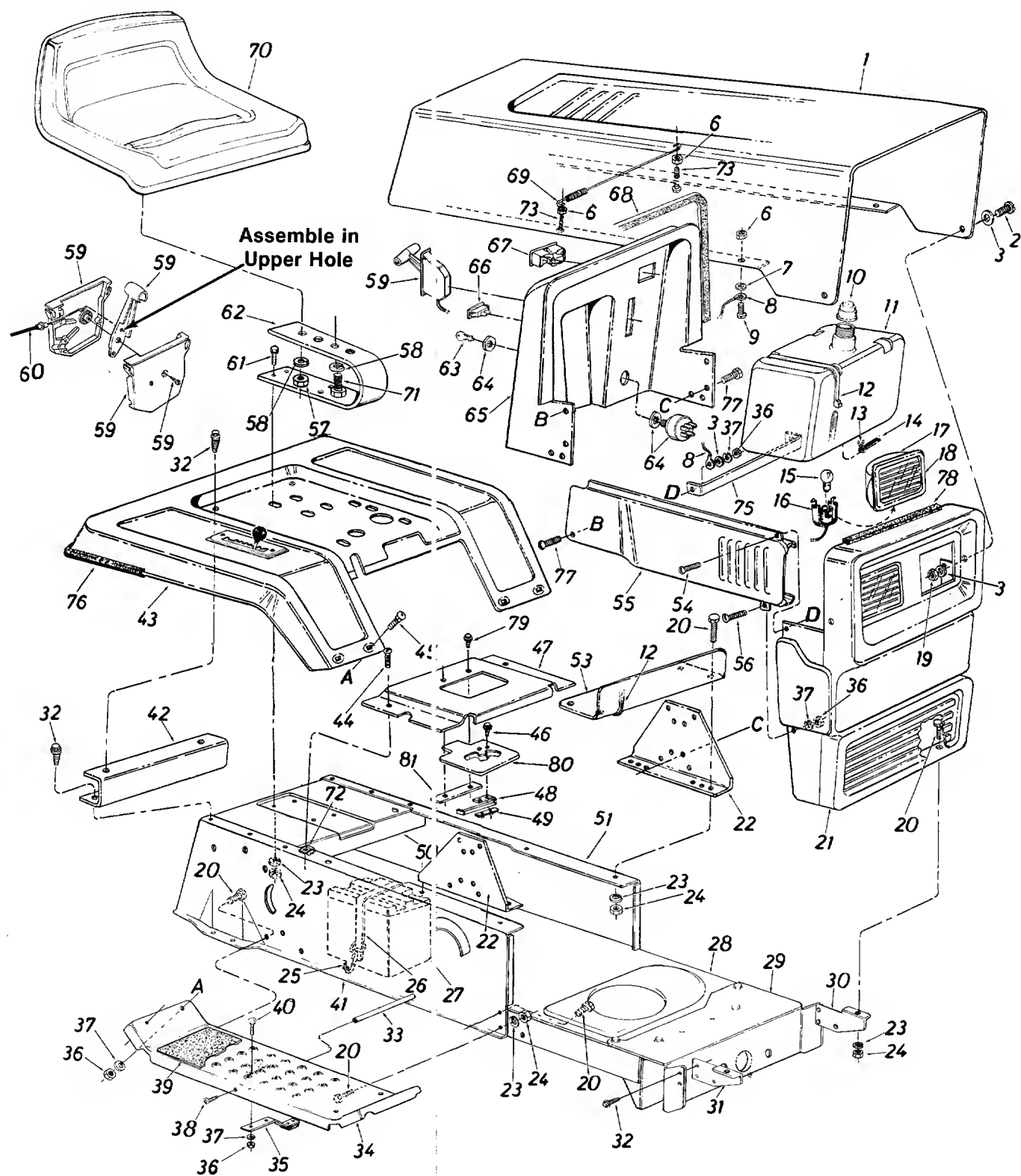
TROUBLE SHOOTING CHART FOR ELECTRIC START MODELS

TROUBLE	LOOK FOR	REMEDY
Engine will not crank	Battery installed incorrectly	The battery must be installed with the negative, identified at the terminal post by (Neg, N or -), grounded. The positive (Pos, P or +) attaches to the large cable from the solenoid. The small red wire from the fuse holder or circuit breaker is also attached to the positive terminal.
	Blown fuse or circuit breaker	Replace fuse with 7½ amp. fuse ¼ x 1¼" lg. Circuit breaker will reset itself when it cools off. Fuses or circuit breakers seldom open or fail without a reason. The problem must be corrected. Check for loose connections in the fuse holder. Replace fuse holder if necessary. A dead short may be in the cranking or charging circuit where the insulation may have rubbed through and exposed the bare wire. Replace the wire or repair with electrician's tape if the wire strands have not been damaged. Note: Look for a wire pinched between body panels, burned by the exhaust pipe or muffler or rubbed against a moving part.
	Battery is dead or weak	<p>Use a hydrometer to check the condition of the battery. The Specific Gravity (s.g.) should be 1.265 at 80° F. (1.215 s.g. minimum needed for cranking engine). The reason for the battery failing must be determined. (1) Defective battery. Battery will not accept or hold a full charge. (2) Short circuit. Check for grounded wire. (3) Charging system not working, either engine alternator or trickle charger.</p> <p>Trickle Charger. Check with multimeter. Charger 725-0578—input 120 V A.C., no load output 13.5 V D.C., rated load current 1 amp. Charger 725-0507—input 120 V A.C., no load output 17.4 V D.C., rated load current 1½ amp.</p> <p>Alternator (dual or single circuit) The charging system is an alternator located under the flywheel. It is unregulated and rated 3 amp. at 3600 r.p.m. A diode (rectifier) is located in the output lead just before the wire harness plug on the engine side.</p> <div style="text-align: center;"> </div> <p>The diode changes A.C. to D.C. to charge the battery. A bad diode can either fail to charge the battery or discharge the battery if the alternator is shorted as well as the diode. To test: (1) Disconnect charger lead from the battery (small red wire). (2) Connect 12 V small test lamp between the 3 amp. D.C. charge lead and the positive terminal of the battery. (3) With the engine off, the lamp should not light. If it does, the diode and possibly the alternator should be replaced. (4) Start the engine. The lamp should light. If it does not, the alternator (stator) or lead wire is bad and should be replaced.</p>
Engine cranks but will not start	Mechanical failure. (Wires and switches)	The interlock system includes two mechanical activated switches which are wired in series in the circuit used to energize the starter solenoid. While testing the interlock system, you will make the mower temporarily unsafe by permitting the engine to be started with the blade and clutch engaged. WARNING: While testing, disengage the clutch, shut off the blade control, set the parking brake and place the gear shift lever in neutral. Attach a wire (minimum 18 gauge) to the positive terminal of the battery and touch the other end to the small terminal on the solenoid. If the engine does not crank: (1) There is a loose connection or poor ground. (2) The solenoid may be bad. The solenoid can be checked by using a heavy wire (#8 gauge minimum) and jumping between the two large terminals. If the engine cranks, the solenoid is bad. (3) If the engine does not crank when you jump the solenoid, have the starter motor tested by an authorized engine dealer. If the engine does crank, the problem is with one of the safety switches, ignition switch or the wire between the fuse holder (or circuit breaker) and the small terminal on the solenoid. Note: Look for a poor connection at the switches or a defective switch. Replace if necessary.
	Throttle or choke not in starting position	Check owner's guide for correct position for throttle control and choke (if separate control) for starting.

TROUBLE SHOOTING CHART FOR ELECTRIC START MODELS

TROUBLE	LOOK FOR	REMEDY
	No spark to spark plug	Spark plug lead disconnected. Connect lead. Hold spark plug lead away from engine block about 1/8". Crank engine. There should be a spark. If not, have engine repaired at authorized engine service dealer. Faulty spark plug. To test, remove spark plug. Attach spark plug lead to spark plug. Ground the spark plug body against the engine block. Crank the engine. The spark plug should fire at the electrode. Replace if it does not.
	No fuel to the carburetor	Gasoline tank empty. Fill. Fuel valve shut off. Open valve. Valve is located either at the bottom of the fuel tank or on the carburetor. Fuel line plugged. Remove and clean.
	Air filter dirty	If the air cleaner is dirty, the engine may not start. Clean or replace as recommended by the engine manufacturer.
Engine smokes	Engine loses crankcase vacuum	Dipstick not seated or broken. Replace defective part. Engine breather defective. Replace.
Excessive vibration	Bent or damaged blade spindle	Stop engine immediately. Check all pulleys, blade adapters, keys and bolts for tightness and damage. Tighten or replace any damaged parts.
	Bent blade	Stop engine immediately. Replace damaged blade. Only use original equipment blades.
Mower will not discharge grass or leaves uncut strips	Engine speed low Transmission selection Blades short or dull	Throttle must be set between 3/4 and full throttle. Use lower transmission gear. The slower your ground speed, the better the quality of cut. Sharpen or replace blades (uncut strip problem only).

Model 618



Model 618

PARTS LIST FOR MODEL 618 LAWN TRACTOR

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART	REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	15808		Hood		44	710-0351		Truss Mach. Tap Scr. #10 x .50" Lg.	
2	710-0258		Hex Scr. 1/4-20 x .62" Lg.*		45	710-0167		Carriage Bolt 1/4-20 x .50" Lg.*	
3	736-0463		FI-Wash. .296" I.D. x .62" O.D.		46	710-0473		Truss Hd. Scr. #10-24 x .50" Lg.*	
6	712-0272		Hex Sems Nut #10-24 Thd.*		47	16188		Transmission Panel	N
7	736-0931		FI-Wash. .203" I.D. x .41" O.D. x .040		48	725-0759		Reverse Safety Switch	
8	727-0290		Hood Stop		49	726-0222		Insulator Nut Plate	
9	710-0473		Truss Hd. Scr. #10-24 x 1/2" Lg.*		50	14607		Hitch Plate	
10	723-0333		Fuel Cap Gauge		51	14603		L.H. Side Frame	
11	751-0172		Fuel Tank		53	14605		Fuel Tank Support	
12	726-0209		Tie Strap		54	710-0255		Truss Hd. Scr. 1/4-20 x .75" Lg.*	
13	726-0207		Hose Clamp		55	15814		Side Cover—R.H.	
14	751-0173		Fuel Line			15815		Side Cover—L.H. (Not Shown)	
15	725-0963		Lamp		56	710-0286		Truss Mach. Scr. 1/4-20 x .50" Lg.*	
16	725-0964		Socket		57	712-0206		Hex Nut 1/2-13 Thd.*	
17	731-0705		Headlight Housing		58	736-0921		L-Wash. 1/2" I.D.*	
18	731-0706		Lens		59	831-0692		Throttle Control Box Ass'y.	
19	712-0107		Hex L-Nut 1/4-20 Thd.		60	746-0500		Throttle Control Wire (B&S)	
20	710-0118		Hex Bolt 5/16-18 x .75" Lg.*			746-0504		Throttle Control Wire (Tec.)	
21	15804		Grille		61	710-0376		Hex Bolt 5/16-18 x 1.00" Lg.*	
	15805		Grille Without Headlights		62	732-0458		Seat Spring 5.5" High	
22	15818		Dash Support Bracket		63	725-0201		Ignition Key	
23	736-0119		L-Wash. 5/16" I.D.*		64	725-0267		Ignition Switch	
24	712-0267		Hex Nut 5/16-18 Thd.*		65	15810		Dash Panel	
25	747-0475		Battery Strap Hook		66	725-0634		Light Switch (Optional)	
26	731-0718		Battery Hold Down Strap		67	725-0925		Ammeter (Optional)	
27	725-0514		12V—Battery		68	731-0511		Trim Strip—27"	
28	14606		Lower Frame		69	732-0462		Hood Spring	
29	14619		Front Pivot Brk't.		70	757-0264		Seat Ass'y. (Used w/Hex Nut)	
30	15821		Grille Mount Brk't.—L.H.			757-0299		Seat Ass'y. (Used w/Hex Bolts)	
31	15822		Grille Mount Brk't.—R.H.		71	710-0493		Hex Bolt 1/2-13 x 1.0" Lg. (2 Req'd.) (Optional)	
32	710-0726		Hex Wash. Hd. AB-Tap Scr. 5/16 x .75" Lg.		72	726-0139		Speed Nut #10Z	
33	738-0526		Running Board Rod		73	710-0749		Hex Scr. #10-24 x 1.0" Lg.	
34	14604		Running Board (R.H. & L.H.)		75	15931		Tie Strap—Grille/Side Panel	
35	—		Blade Brake Ass'y. (Refer to Deck Breakdown)		76	731-0511		Trim Strip—81"	
36	712-0287		Hex Nut 1/4-20 Thd.*		77	710-0642		Hex Wash. Hd. Tap Scr. 1/4 x .75" Lg.	
37	736-0329		L-Wash. 1/4" I.D.*		78	722-0155		Foam Strip 3/8 x 1 x 14" Lg.	
38	710-0323		Truss Mach. Scr. 5/16-18 x .75" Lg.*		79	710-0924		Truss Mach. Scr. 1/4-20 x .75" Lg.	
39	723-0360		Foot Pad (Optional)		80	16189		Gear Selection Plate	N
40	710-0134		Carriage Bolt 1/4-20 x .62" Lg.*		81	16190		Clamping Plate	N
41	14602		R.H. Side Frame						
42	15848		Fender Mount Brace						
43	16199		Rear Fender	N					
	16198		Rear Fender (R.H.)†	N					
	15350		Rear Fender (L.H.)†	N					

†Used with 36" Rear Discharge Deck Only.

*For faster service obtain standard nuts, bolts and washers locally. If these items cannot be obtained locally, order by part number and size as shown on parts list.

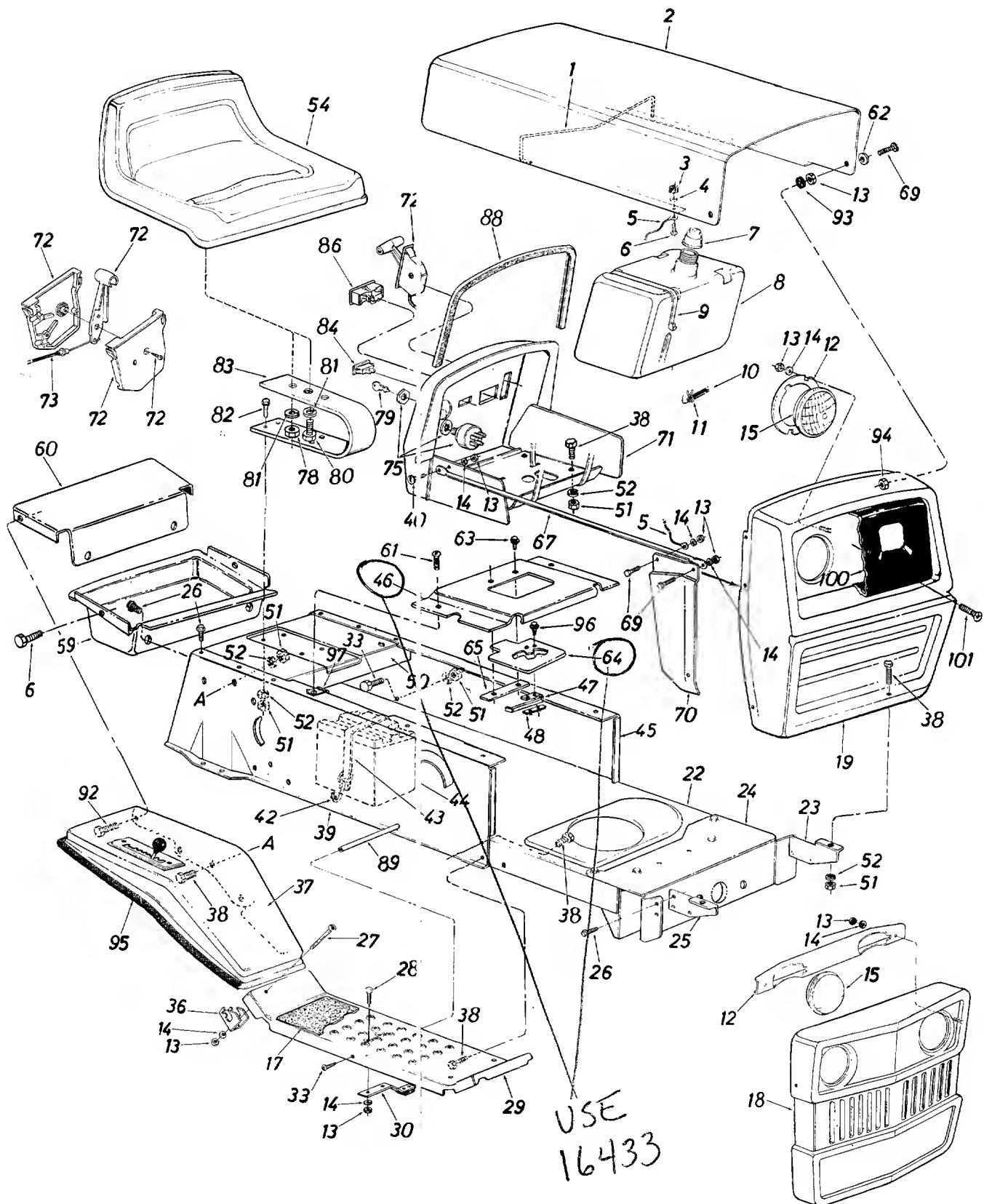
(462—Red Flake)

When ordering parts, if color or finish is important use the appropriate color code shown above. (e.g. Red Flake Finish—11836 (462).)



This instruction manual covers various models, and all specifications shown do not necessarily apply to your model. Specifications subject to change without notice or obligation.

Models 620, 638, 688 and 698



Models 620, 638, 688 and 698

16433

PARTS LIST FOR MODELS 620, 638, 688 AND 698 LAWN TRACTORS

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART	REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	732-0414		Hood Spring		50	14607		Hitch Plate	
2	14616 —462		Hood†		51	712-0267		Hex Nut 5/16-18 Thd.*	
	14665 —462		Hood††		52	736-0119		L-Wash. 5/16" I.D.*	
3	712-0272		Hex Sems Nut #10-24 Thd.*		54	757-0264		Seat Ass'y. (Used w/Hex Nut)	
4	736-0463		Fl-Wash. .281" I.D. x .62" O.D. x .051			757-0299		Seat Ass'y. (Used w/Hex Bolts)	
5	723-0302		Hood Stop 7" Lg.		59	731-0561		Tool Tray (Optional)	
6	710-0473		Truss Hd. Scr. #10-24 x 1/2"		60	14789		Fender Panel (Optional)	
7	723-0333		Fuel Cap Gauge		61	710-0351		Truss Mach. Tap Scr. #10 x .50" Lg.	
8	751-0172		Fuel Tank		62	736-0463		Fl-Wash. .296 I.D. x .62 O.D.	
9	726-0209		Tie Strap		63	710-0924		Truss Mach. Scr. 1/4-20 x .75" Lg.	
10	751-0173		Fuel Line		64	16189		Gear Selection Plate	N
11	726-0207		Hose Clamp		65	16190		Clamping Plate	N
12	14672		Headlight Retainer†		67	749-0517		Grille Support Rod (R.H. & L.H.)	
	09960		Headlight Retainer††		69	710-0255		Truss Hd. Scr. 1/4-20 x .75" Lg.*	
13	712-0287		Hex Nut 1/4-20 Thd.*		70	14670		R.H.—Grille Side Panel†	
14	736-0329		L-Wash. 1/4" I.D.*			14748		R.H.—Grille Side Panel††	
15	725-0222		Headlight			14669		L.H.—Grille Side Panel†	
17	723-0360		Foot Pad (Optional)			14749		L.H.—Grille Side Panel††	
18	14635		Grille Ass'y. (Optional)		71	15933		Dash Panel Ass'y.	
	14612		Grille Without Headlights		72	831-0692		Throttle Control Box Ass'y.	
19	14781		Grille Ass'y. (Optional)		73	746-0501		Throttle Control Wire—B&S	
	14786		Grille Without Headlights			746-0504		Throttle Control Wire—Tec.	
22	14606		Lower Frame		75	725-0267		Ignition Switch	
23	13863		Grille Mount Brkt.—L.H.		78	712-0206		Hex Nut 1/2-13 Thd. (Optional)	
24	14619		Front Pivot Brkt.		79	725-0201		Ignition Key	
25	13862		Grille Mount Brkt.—R.H.		80	710-0493		Hex Bolt 1/2-13 x 1.00" Lg. (2-Req'd.) (Optional)	
26	710-0726		Hex Wash. Hd. AB-Tap Scr. 5/16 x .75" Lg.		81	736-0921		L-Wash. 1/2" I.D.*	
27	710-0524		Truss Hd. Scr. 1/4-20 x 1.75" Lg.*		82	710-0376		Hex Bolt 5/16-18 x 1.00" Lg.*	
28	710-0134		Carriage Bolt 1/4-20 x .62" Lg.*		83	732-0458		Seat Spring 5.5" High	
29	14604		Running Board (R.H. & L.H.)		84	725-0634		Light Switch (Optional)	
30	—		Blade Brake Ass'y. (Refer to Deck Breakdown)		86	725-0925		Ammeter (Optional)	
33	710-0323		Truss Mach. Scr. 5/16-18 x .75" Lg.*		88	731-0511		Molding Strip 27" Lg.	
36	14671		Fender Clamp		89	738-0526		Running Board Rod	
37	16197		Fender (R.H.)	N	92	710-0599		Thread Rolling Scr. 1/4-20 x .50" Lg.	
	14666		Fender (L.H.)		93	735-0144		Rubber Wash. 1/2" I.D. x 1.0 O.D. x .25"	
	16198		Fender (R.H.)—Used w/36" Rear Discharge Deck	N	94	712-0324		Hex Sems Ins. L-Nut 1/4-20 Thd.	
	15350		Fender (L.H.)—Used w/36" Rear Discharge Deck		95	731-0516		Trim Strip	
38	710-0118		Hex Bolt 5/16-18 x .75" Lg.*		96	710-0227		Hex Wash. Hd. AB-Tap Scr. #8 x .50" Lg.	
39	14602		R.H. Side Frame		97	726-0139		Speed Nut #10Z	
40	710-0258		Hex Bolt 1/4-20 x .62" Lg.*		100	731-0465		Bezel (Optional)	
42	747-0475		Battery Strap Hook		101	710-0425		Truss Scr. #10-24 x .62" Lg. (Optional)	
43	731-0718		Battery Hold Down Strap						
44	725-0514		12-V Battery						
45	14603		L.H. Side Frame						
46	16188		Shift Cover	N					
47	725-0759		Reverse Safety Switch						
48	726-0222		Insulator Nut Plate						

†Used with Grille Assembly Ref. No. 18

††Used with Grille Assembly Ref. No. 19

(462—Red Flake)

*For faster service obtain standard nuts, bolts and washers locally. If these items cannot be obtained locally, order by part number and size as shown on parts list.

When ordering parts, if color or finish is important use the appropriate color code shown above. (e.g. Red Flake Finish—11836 (462).)

This is a detailed exploded view diagram of a mechanical assembly, likely a piece of equipment with a control panel and a base. The diagram shows the following components and their assembly relationships:

- Top Housing (1):** The main upper enclosure, shown in an exploded position relative to the base.
- Base (29):** The main lower enclosure, which houses the internal components.
- Control Panel (10):** A panel with two large circular openings, likely for gauges or displays.
- Internal Components:**
 - Control Panel (10):** A panel with two large circular openings, likely for gauges or displays.
 - Internal Components:** Various mechanical parts including switches, levers, and structural supports, numbered 1 through 106.
 - Control Panel (10):** A panel with two large circular openings, likely for gauges or displays.
- Assembly Labels:** Letters A through Z are used to indicate specific assembly points or sub-assemblies.
- Fasteners:** Numerous screws, bolts, and pins are shown, numbered 1 through 106, indicating the assembly sequence.

The diagram is a technical drawing showing the exploded view of a mechanical assembly. It includes a top housing (1), a base (29), and various internal components like a control panel (10), switches, and structural parts. The assembly is shown in an exploded view, with parts numbered 1 through 106. The diagram also includes assembly labels (A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z) and various fasteners (screws, bolts, pins) numbered 1 through 106.

Model 668

PARTS LIST FOR MODEL 668 LAWN TRACTOR

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART	REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	12780	—462	Hood		54	757-0264		Seat Ass'y. (used w/Hex Nut)	
2	712-0121		Hex Nut #10-24 Thd.*			757-0299		Seat Ass'y. (used w/Hex Bolts)	
3	736-0722		L-Wash. #10 I.D.		55	710-0924		Truss Mach. Scr. 1/4-20 x .75" Lg.	
4	736-0463		Fl-Wash. .25" I.D. x .62"		56	16189		Gear Selection Plate	N
5	710-0192		Truss Scr. #10-24 x .375"		57	16190		Clamping Plate	N
6	710-0473		Truss Hd. Scr. #10-24 x .50"		58	710-0227		Hex AB-Tap Scr. #8 x .50"	
7	727-0199		Hood Stop		59	731-0561		Tool Tray (Optional)	
8	725-0222		Headlight†		60	14789		Fender Panel (Optional)	
9	12787		Headlight Bezel†		61	710-0351		Truss Mach. Tap Scr. #10 x .50" Lg.	
10	12814	—462	Front Grille Upper Ass'y.†		62	725-0964		Gear Lamp Socket†	
11	710-0224		Hex AB-Tap Scr. #10 x .50"		68	12788		Head Lamp Retainer†	
12	12781	—462	Lower Grille†		69	12784	—462	Side Panel—R.H.	
13	712-0287		Hex Nut 1/4-20 Thd.*		70	12785	—462	Side Panel—L.H.	
14	736-0329		L-Wash. 1/4" I.D.*		71	710-0258		Hex Bolt 1/4-20 x .62" Lg.*	
15	731-0144		Vinyl "U"-Channel†		72	726-0153		Tie Strap	
16	12791		Grille Screen†		73	723-0333		Fuel Cap Gauge	
17	710-0442		Hex Bolt 5/16-18 x 1.50"		74	710-0253		Hex Bolt 3/8-16 x 1.00" Lg.*	
18	15544	—462	R.H. Lower Side Panel		75	736-0101		Fl-Wash. .380" I.D. x 1.00"	
19	15545	—462	L.H. Lower Side Panel		76	735-0126		Rubber Wash. .33" I.D. x .87" O.D.	
20	731-0705		Headlight Housing†		77	831-0692		Throttle Control Box Ass'y.	
21	731-0706		Headlight Lens†		78	712-0206		Hex Nut 1/2-13 Thd. (Optional)	
22	14606		Lower Frame		79	731-0709		Dash Panel Insert	
23	751-0172		Fuel Tank		80	710-0493		Hex Bolt 1/2-13 x 1.00" Lg. (2 Req'd.) (Optional)	
24	14619		Front Pivot Brkt.		81	736-0921		L-Wash. 1/2" I.D.*	
25	14603		Fuel Tank Support		82	710-0376		Hex Bolt 5/16-18 x 1.00"	
26	712-0375		Hex Cent. L-Nut 3/8-16 Thd.		83	732-0458		Seat Spring	
27	710-0524		Truss Hd. Scr. 1/4-20 x 1.75"		84	723-0360		Foot Pad (Optional)	
28	710-0134		Carriage Bolt 1/4-20 x .62"		85	15895		Dash Panel Ass'y.	
29	14604	—462	Running Board (R.H. & L.H.)		86	723-0296		Hood Latch Ass'y.	
30	—		Blade Brake Ass'y. (Refer to Deck Breakdown)		87	710-0289		Hex Bolt 1/4-20 x .50" Lg.*	
32	725-0963		Head Lamp†	N	89	738-0526		Running Board Rod	
33	710-0323		Truss Mach. Scr. 5/16-18 x .75" Lg.*		90	726-0207		Hose Clamp	
34	725-0634		Light Switch†		91	751-0173		Fuel Line	
36	14671		Fender Clamp		92	710-0599		Thread Rolling Scr. 1/4-20 x .50" Lg.	
37	16197		Fender (R.H.)		93	725-0267		Ignition Switch	
	14666		Fender (L.H.)		94	725-0201		Ignition Key	
	16198		Fender (R.H.)—Used w/36" Rear Discharge Deck	N	95	731-0516		Trim Strip	
	15350		Fender (L.H.)—Used w/36" Rear Discharge Deck		96	725-0925		Ammeter (Optional)	
38	710-0118		Hex Bolt 5/16-18 x .75" Lg.*		99	736-0242		Belleville Wash. .34" I.D.	
39	14602		R.H. Side Frame		100	22550		Spacer .344" I.D. x 1.0" O.D. x .75" Lg.	
40	15871		Front Upper Grille Ass'y.†		101	710-0726		Hex Wash. Hd. AB-Tap Scr. 5/16 x .75" Lg.	
41	15872		Lower Grille†		102	746-0505		Throttle Control Wire (B&S)	
42	747-0475		Battery Strap Hook			746-0511		Throttle Control Wire (Tec.)	
43	731-0718		Battery Hold Down Strap		103	710-0651		Hex Wash. Hd. Self-Tap Scr.	
44	725-0514		12-V Battery		104	726-0139		Speed Nut #10Z	
45	14603		L.H. Side Frame		105	757-0272		Trim Strip—15"	
46	16187		Shift Cover	N	106	726-0139		Speed Nut #10Z	
47	725-0759		Reverse Safety Switch						
48	726-0222		Insulator Nut Plate						
50	14607		Hitch Plate						
51	712-0267		Hex Nut 5/16-18 Thd.*						
52	736-0119		L-Wash. 5/16" I.D.*						

†Optional Parts

*For faster service obtain standard nuts, bolts and washers locally. If these items cannot be obtained locally, order by part number and size as shown on parts list.

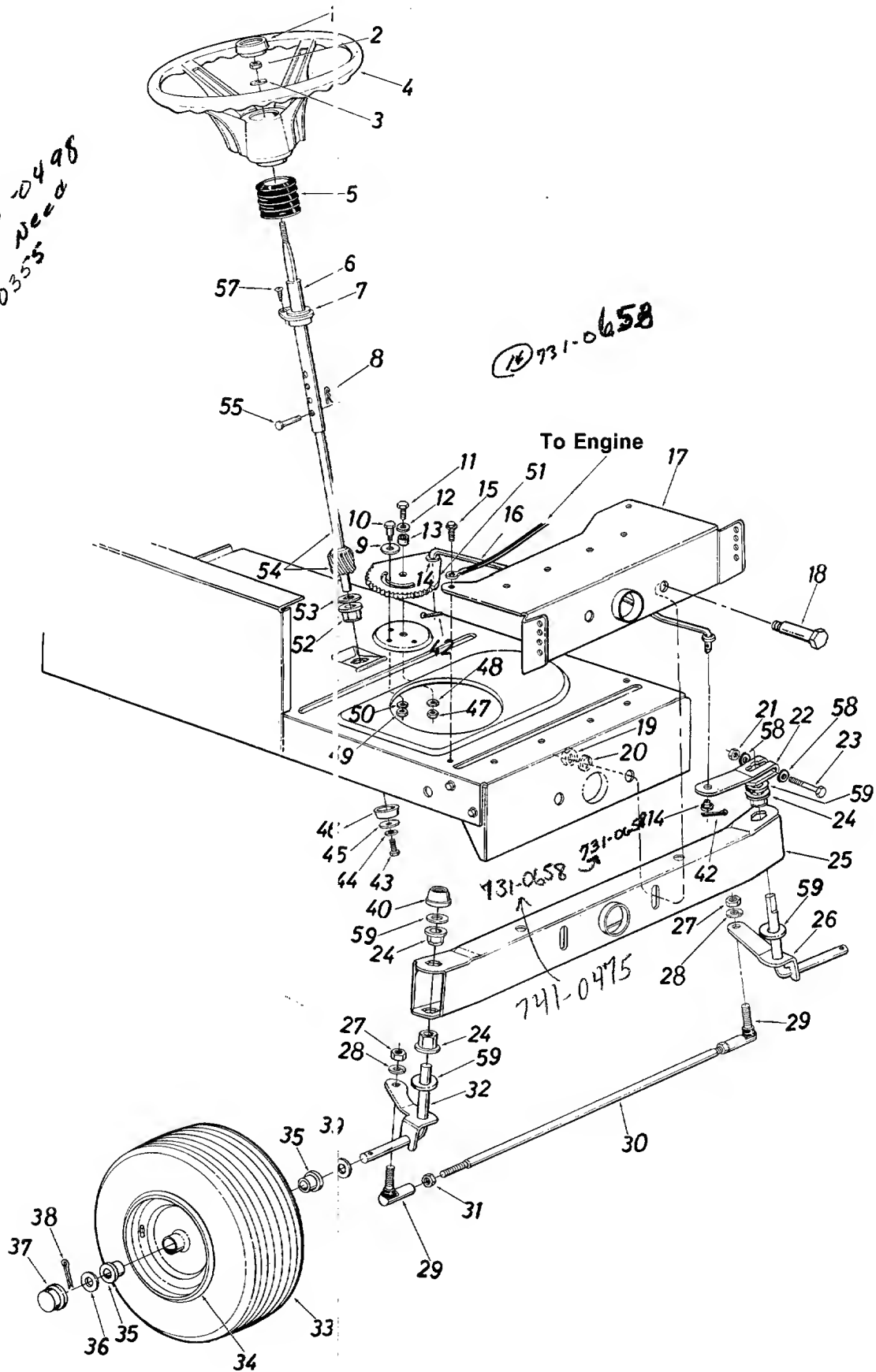


NOTE

This instruction manual covers various models, and all specifications shown do not necessarily apply to your model. Specifications subject to change without notice or obligation.

Models 618, 620, 638, 668, 688 and 698

Ref # 14
SEE A150
Kit # 753-0498
will still need
736-0355



Models 618, 620, 638, 668, 688 and 698

PARTS LIST FOR MODELS 618, 620, 638, 668, 688 AND 698 LAWN TRACTORS

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART	REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	731-0220		Steering Wheel Cap		29	723-0156		Ball Joint 3/8-24 Thd.	
2	712-0267		Hex Nut 5/16-18 Thd.*		30	711-0613		Tie Rod	
3	736-0242		Belleville Wash. .345" I.D.		31	712-0711		Hex Jam Nut 3/8-24 Thd.*	
4	731-0219		Steering Wheel 12" Dia.		32	14650		Front Axle Ass'y.—R.H.	
	731-0356		Steering Wheel 13.5" Dia.			15840		Front Axle Ass'y.—R.H.†	
5	731-0559		Steering Bellow—4.5"		33	**		Wheel Ass'y. Comp.	
			(618, 620, 638, 688 & 698)		34	**		Front Wheel Rim Only	
	731-0654		Steering Bellow—9" (668)		35	741-0313		Bearing	
6	14775		Steering Column Ass'y.		36	736-0285		Fl-Wash. .635 I.D. x 1.59"	
7	741-0356		Flange Bearing .890 I.D. x 1.36 O.D.					O.D.	
8	714-0147		Internal Cotter Pin 1/4" Dia.		37	731-0484		Front Wheel Hub Cap	
9	736-0319		Fl-Wash. .438" I.D. x 1.37" O.D.			734-0541		Front Wheel Hub Cap (Chrome—Not Shown) (Optional)	
10	738-0141		Shoulder Bolt .437" Dia. x .35 Lg. 5/16-18 Thd.		38	714-0470		Cotter Pin 1/8" Dia. x 1.25" Lg.*	
11	710-0152		Hex Bolt 3/8-24 x 1.0" Lg. (Grade 5)		39	736-0156		Fl-Wash. .635" I.D. x 1.20" O.D.	
12	736-0206		Fl-Wash. .38" I.D. x 1.0" O.D.		40	726-0214		Push Cap 5/8" Dia. Rod	
13	750-0535		Spacer .380" I.D. x .625" O.D. x .227		42	714-0115		Cotter Pin 1/8" Dia. x 1.0" Lg.	
14	736-0355		Flat Washer .56 I.D. x 1.0 O.D.		43	710-0538		Hex L-Bolt 5/16-18 x .62" Lg.*	
15	710-0726		Hex Wash. Hd. Self-Tap Scr.		44	736-0119		L-Wash. 5/16" I.D.*	
16	711-0782		Steering Drag Link	N	45	736-0231		Fl-Wash. .344" I.D. x 1.25" O.D.	
17	14619		Front Pivot Brkt.		46	750-0532		Spacer (Plastic)	
18	738-0527		Shoulder Bolt .498" Dia. x 2.04 Lg. 3/8-16 Thd.		47	712-0241		Hex Nut 3/8-24 Thd.*	
19	712-0798		Hex Nut 3/8-16 Thd.*		48	736-0169		L-Wash. 3/8" I.D.*	
20	736-0169		L-Wash. 3/8" I.D.*		49	712-0267		Hex Nut 5/16-18 Thd.*	
21	712-0237		Hex Cent. L-Nut 5/16-24 Thd.		50	736-0119		L-Wash. 5/16" I.D.*	
22	14611		Steering Arm Front Axle		51	717-0468		Steering Gear Segment	
23	710-0772		Hex Bolt 5/16-24 x 2.00" Lg. (Grade 5)		52	741-0225		Hex Flg. Brg. .634 I.D.	
24	741-0225		Hex Flg. Brg. .634 I.D.		53	736-0187		Fl-Wash. (Hardened)	
25	14608		Pivot Bar Ass'y.		54	738-0522		Steering Shaft Lower	
26	14649		Front Axle Ass'y.—L.H.		55	711-0684		Clevis Pin 1/4" Dia. x 1.00" Lg.	
	15841		Front Axle Ass'y.—L.H.†		57	710-0837		Oval Hd. Cr.—Sunk Scr. #10 x 5/8" Lg.	
27	712-0241		Hex Nut 3/8-24 Thd.*		58	736-0242		Bell-Wash.	
28	736-0169		L-Wash. 3/8" I.D.*		59	736-0187		Fl-Wash. (Hardened)	

†Used With 30" Rear Discharge Deck Only.

(462—Red Flake)

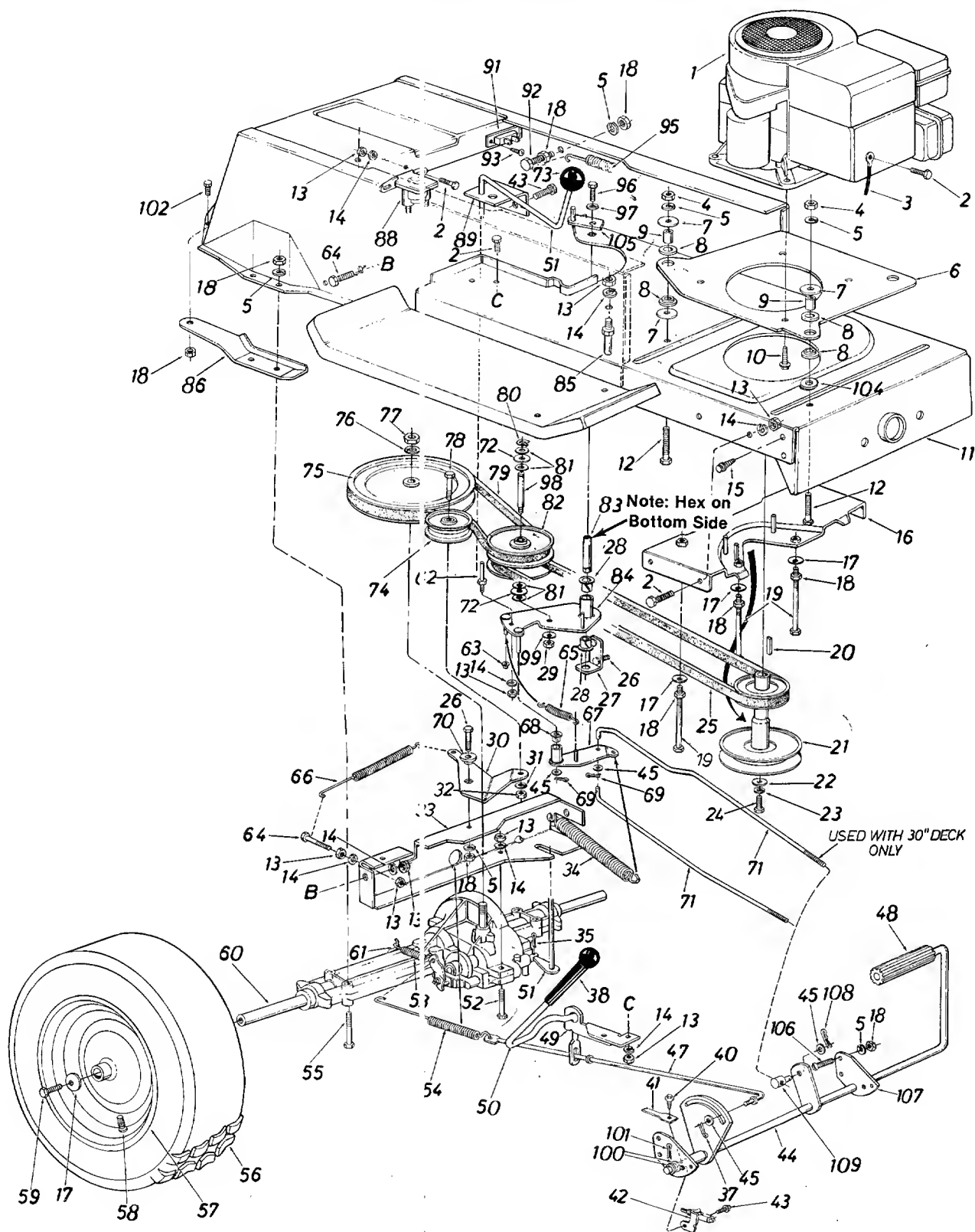
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**FRONT WHEEL CHART

Description	15 x 6.00 (Rib Tread)	15 x 6.00 (Turf Tread)	13 x 5.00
Wheel Assembly Comp.	734-0998	734-1136	734-0999
Tire Only	734-0498	734-0427	734-0495
Rim Only	734-0997	734-0997	734-0986
Bearing	741-0313	741-0313	741-0313
Air Valve	734-0255	734-0255	734-0255
Grease Fitting	737-0146	737-0146	734-0146

Models 618, 620, 638, 668, 688 and 698



**** REAR WHEEL CHART**

Description	18 x 9.50	18 x 8.50	18 x 6.50	16 x 6.50	18 x 5.5
Wheel Assembly Comp.	734-0817	734-0601	734-1132	734-0591	734-1190
Tire Only	734-0448	734-0516	734-0294	734-0275	734-1197
Rim Only	734-0603	734-0603	734-1133	734-0594	734-1191

Models 618, 620, 638, 668, 688 and 698

PARTS LIST FOR MODELS 618, 620, 638, 668, 688 AND 698 LAWN TRACTORS

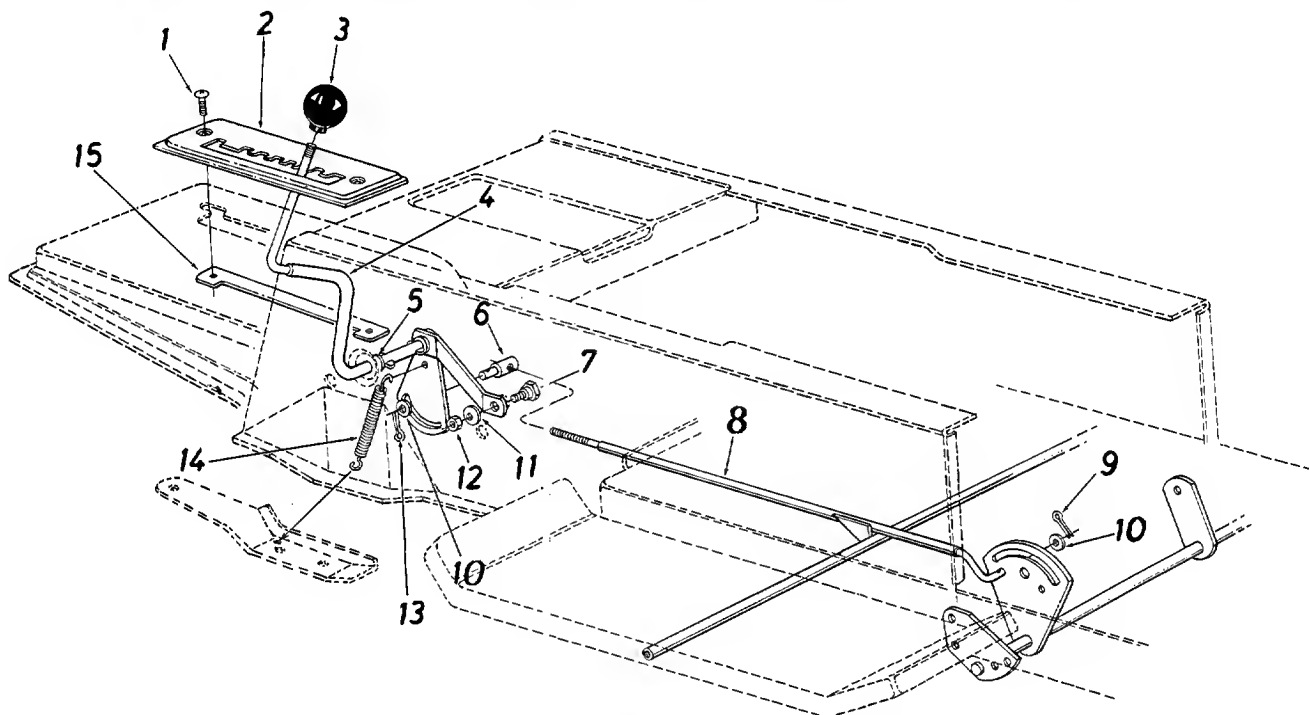
REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART	REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	—		Engine		54	732-0413		Ext. Spring .59" O.D. x 7.08"	
2	710-0258		Hex Bolt 1/4-20 x .62" Lg.*		55	710-0378		Hex Bolt 5/16-18 x 2.50"*	
3	725-0122		Electric Ground Wire		56	**		Wheel Ass'y. Comp.	
4	712-0123		Hex Nut 5/16-24 Thd.*		57	**		Wheel Rim Only	
5	736-0119		L-Wash. 5/16" I.D.*		58	734-0255		Air Valve (Service Only)	
6	14791		Engine Mounting Plate		59	710-0627		Hex Bolt 5/16-24 x .75" Lg.*	
7	736-0343	THK 120	FI-Wash. .320" I.D. x 1.25"		60	717-0750		Transaxle Complete	
8	722-0153		Engine Mounting Grommet		61	732-0454		Brake Return Spring Anchor	
9	750-0539		Spacer		62	711-0768		Belt Guard Pin 1/4-20 Thd.	
10	710-0502		Hex Bolt 3/8-16 x 1.25" Lg.		63	726-0106		Cap Speed Nut 1/4" Dia.	
11	15930		Lower Frame Ass'y.		64	710-0751		Hex Bolt 1/4-20 x .62" Lg.—	
12	710-0158		Hex Bolt 5/16-24 x 1.25"*					Grade 5	
13	712-0287		Hex Nut 1/4-20 Thd.*		65	732-0387		Ext. Spring .50" Dia.	
14	736-0329		L-Wash. 1/4" I.D.*		66	732-0455		Ext. Spring .56" O.D. x 5.96"	
15	710-0726		Hex Wash. Hd. AB-Tap Scr. 5/16" x .75" Lg.		67	16352		Variable Speed Torque Brkt. Ass'y.	N
16	15898		Belt Guard Brkt. Ass'y.		68	741-0419		Flanged Bearing	
17	736-0242		Bell-Wash. .345" I.D. x .88"		69	714-0507		Cotter Pin 3/32" Dia.*	
18	712-0267		Hex Nut 5/16-18 Thd.*		70	748-0234		Shoulder Spacer .500" Dia. x .27" Lg.	
19	710-0190		Hex Bolt 5/16-18 x 4.00"*					Speed Control Link (30" Deck Only)	N
20	714-0114		Sq. Key 1/4" x 1/4" x 2.00"		71	747-0512		Speed Control Link	N
21	756-0423		Engine Pulley 5.56" Dia. & 3.56" Dia. (For 30" R.D. Deck)		72	741-0405		Truss Bearing .56 Dia. x 1.25"	
	756-0428		Engine Pulley (For 34", 36" and 38" Decks)		73	720-0165		Ball Knob	
22	736-0322		FI-Wash. 7/16" I.D. x 1.25"		74	756-0437		FI-Idler Pulley 3.25" x 1.0"	
23	736-0171		L-Wash. 7/16" I.D.*		75	756-0408		11/16" "V"-Pulley 8.0" O.D. x .501" I.D.	
24	710-0757		Hex Bolt 7/16-20 x 1.50" Lg.		76	736-0921		L-Wash. 1/2" I.D.*	
25	754-0280		Variable-Speed Belt .715 x 53" Lg.		77	712-0922		Hex Jam Nut 1/2-20 Thd.*	
26	710-0621		Hex Bolt 5/16-18 x .50" Lg.*		78	710-0459		Hex Bolt 3/8-24 x 1.50" Lg.*	
27	15890		Bearing Shaft Bracket		79	754-0281		Variable Speed Belt .715 x 44" Lg.	
28	741-0295		Flanged Nyliner Brg. 5/8" I.D. x .88" Lg.		80	716-0114		Snap Ring .56" Dia.	
29	712-0241		Hex Nut 3/8-24 Thd.*		81	736-0355		FI-Wash.	
30	15891		Idler Bracket		82	717-0800		Variable Speed Pulley Ass'y. 5" O.D.	
31	736-0169		L-Wash. 3/8" I.D.*		83	711-0766		Bearing Shaft	
32	712-0241		Hex Nut 3/8-24 Thd.*		84	16354		Variable Speed Brkt. Ass'y.	N
33	15945		Transaxle Support Brkt.		85	711-0474		Belt Guard Pin 1/4" Dia. x 1.68" Lg.	
34	732-0459		Ext. Spring .94" O.D. x 6.7					Transaxle Support Brkt.—	
35	714-0115		Cotter Pin 1/8" Dia. x 1.0"*		86	14770		R.H.	
37	714-0111		Cotter Pin 3/32" Dia. x 1.0"*					Transaxle Support Brkt.—	
38	720-0143		Grip—Black					L.H. (Not Shown)	
40	710-0599		Hex Wash. Hd. Self-Tap Scr. 1/4-20 x .50" Lg.			14769		Solenoid	
41	732-0435		Switch Actuator		88	725-0771		Shift Lever Bracket	
42	725-0268		Safety Switch		89	16031		Circuit Breaker	
43	710-0892		Hex Wash. Hd. AB-Tap Scr. 1/4 x .62" Lg.		91	725-0459		Hex Bolt 5/16-18 x 1.25" Lg.	
44	16191		Clutch & Brake Pedal Ass'y.	N	92	710-0528		Truss Hd. Phil. Scr. #10 x 1/2" Lg.	
45	736-0117		FI-Wash.		93	710-0351		Ext. Spring .99" O.D. x 11.0"	
47	747-0472		Brake Rod		95	732-0307		Hex Bolt 3/8-24 x .75" Lg.*	
48	735-0196		Foot Pad		96	710-0180		Bell-Wash. .38" I.D. x .88"	
49	15889		Brake Lever Bracket		97	736-0105		Shaft .56" Dia. x 3.875" Lg.	
50	15888		Hill Holder Brake Handle		98	738-0569		Bell-Wash. .39" I.D. x 1.12"	
51	15838		Shift Lever Ass'y.		99	736-0331		FI-Wash.	
52	710-0559		Hex Bolt 1/4-28 x 1.75" Lg.*		100	736-0256		Cotter Pin	
53	732-0264		Ext. Spring .38" O.D. x 2.5"		101	714-0470			

Models 618, 620, 638, 668, 688 and 698

PARTS LIST FOR MODELS 618, 620, 638, 668, 688 AND 698 LAWN TRACTORS (CONTINUED)

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART	REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
102	710-0604		Hex Wash. Hd. Scr. 5/16 18		107	15835		Pedal Bracket	
			.62" x .62" Lg.		108	714-0104		Hairpin Cotter 1/8" Dia.	
104	736-0362-1		FI-Wash. .32" I.D. x 1.25		109	711-0198		Ferrule	
105	16067		Belt Guard						
106	710-0323		Truss Mach. Scr. 5/16-18 x .75" Lg.*						

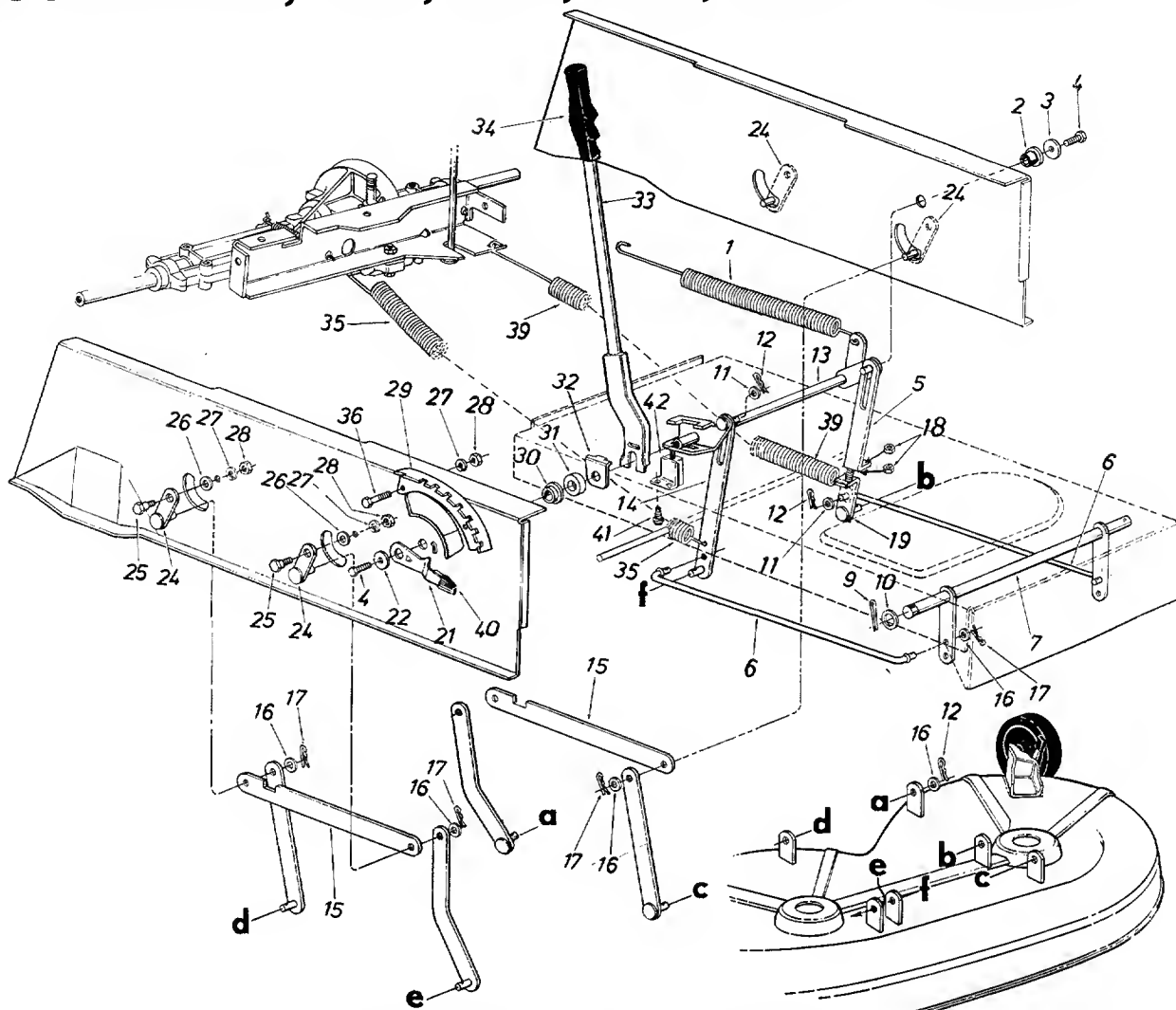
Models 618, 620, 638, 668, 688 and 698



PARTS LIST FOR MODELS 618, 620, 638, 668, 688 AND 698

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART	REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	710-0924		Truss Mach. Scr. 1/4-20 x .75" Lg.		6	711-0198		Ferrule 3/8-24 x .37" Dia.	
2	16237		Speed Selector Plate 4-Speed	N	7	738-0155		Shoulder Bolt .435" Dia. x .160	
	16195		Speed Selector Plate 5-Speed	N	8	16355		Speed Control Rod Ass'y.	N
	16236		Speed Selector Plate 6-Speed	N	9	714-0507		Cotter Pin 3/32" Dia. x .75" Lg.*	
	16194		Speed Selector Plate 7-Speed	N	10	736-0117		FI-Wash. .39" I.D.	
3	720-0175		Gear Shift Knob	N	11	736-0242		Bell-Wash. .34" I.D. x .07" O.D.	
4	16192		Speed Selector Cam Ass'y.	N	12	712-0267		Hex Nut 5/16-18 Thd.*	
5	736-0192		Flat Washer .53" I.D. x .93" O.D.		13	714-0104		Hairpin Cotter 1/8" Dia.	
					14	732-0303		Spring	N
					15	16196		Clamping Plate	N

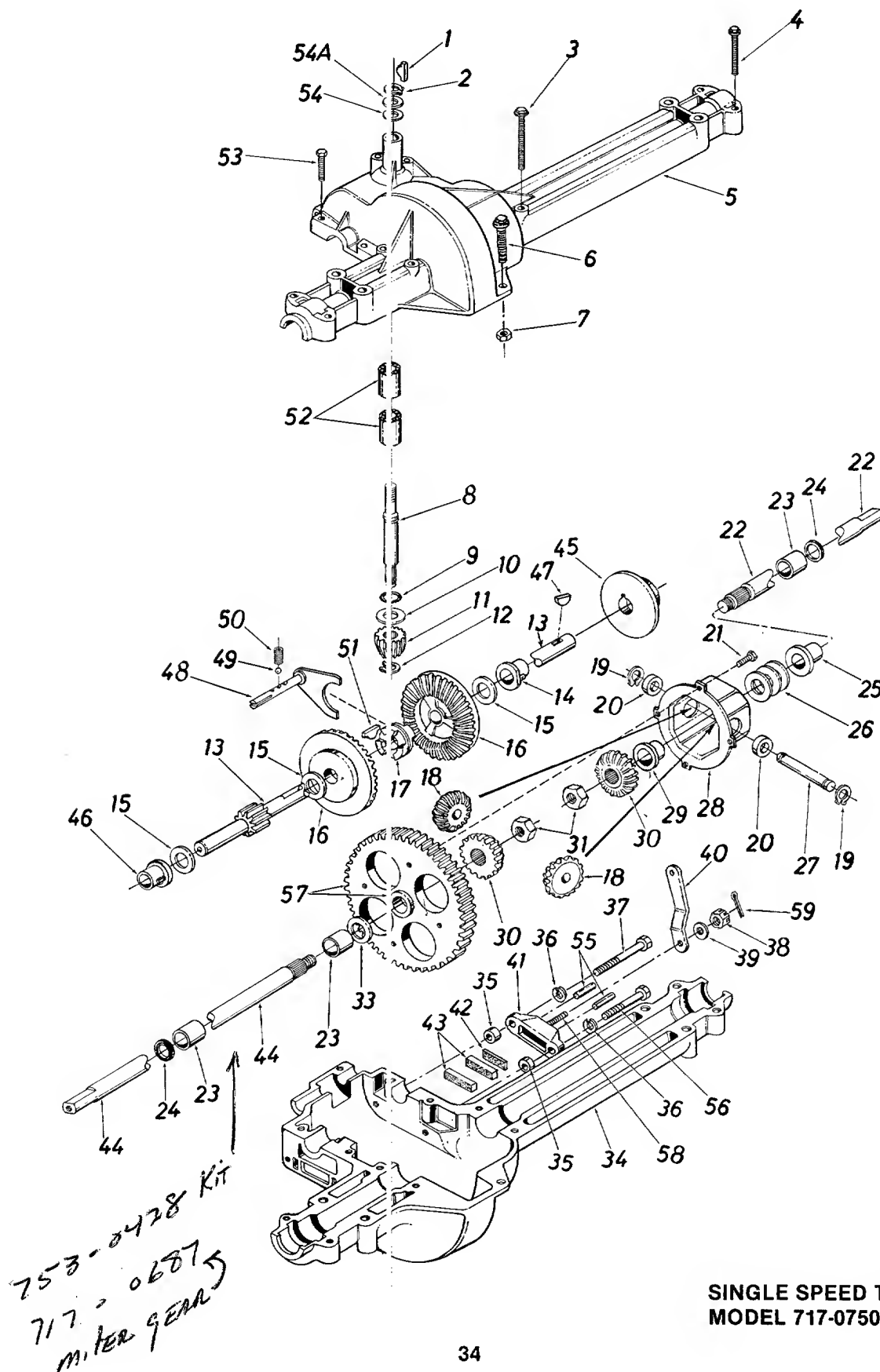
Models 618, 620, 638, 668, 688 and 698



PARTS LIST FOR MODELS 618, 620, 638, 668, 688 AND 698 LAWN TRACTORS

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART	REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	732-0307		Extension Spring .99" O.D. x 11.00" Lg.		24	09721		Pivot Link Ass'y.	
2	741-0313		Flange Bearing .634" I.D.		25	738-0140		Shld. Bolt .437" Dia. x .180" Lg. (5/16-18)	
3	736-0231		FI-Wash. .344" I.D. x 1.125"		26	736-0264		FI-Wash. .344" I.D. x .62"	
4	710-0604		Hex Wash. Hd. 5/16-18 x .62" Lg.		27	736-0119		L-Wash. 5/16" I.D.*	
5	16063		Adj. Link Lift		28	712-0267		Hex Nut 5/16-18 Thd.*	
6	711-0738		Stabilizer Rod		29	14633		Index Brkt.	
7	14647		Stabilizer Shaft Ass'y.		30	736-0341		Flange Wash. .628" I.D. x 1.25" O.D.	
9	714-0470		Cotter Pin 1/8" Dia. x 1 1/4" *		31	735-0216		Rubber Wash. 1.50" O.D.	
10	736-0156		FI-Wash. .635" I.D. x 1.12"		32	14654		Retainer Washer—Lift Handle	
11	736-0192		FI-Wash. .531" I.D. x .940"		33	14645		Lift Handle Ass'y.	
12	714-0101		Inter. Cotter Pin .50" Dia.		34	720-0157		Grip (Lift Handle)	
13	14641		Lift Shaft Ass'y.		35	732-0440		Extension Spring .99" O.D. x 14.25" Lg.	
14	14802		Link Deck Lift Ass'y.		36	710-0118		Hex Bolt 5/16-18 x .75" *	
15	09735		Connecting Rod		39	732-0440		Extension Spring (30" & 36" RD Decks Only)	
16	736-0300		FI-Wash. .40" I.D. x .88"		40	08540		Knob	
17	714-0104		Inter. Cotter Pin—3/8" Rod		41	710-0351		Hex AB-Tap Scr. #10 x .50"	
18	712-0342		Hex Jam Nut 3/8-16 Thd.		42	725-0803		Safety Switch	
19	16064		Adj. Link Lift Ass'y.						
21	732-0412		Deck Lift—Down Stop						
22	736-0231		FI-Wash. .344" I.D. x 1.125" O.D. x .125						

Models 618, 620, 638, 668, 688 and 698



Models 618, 620, 638, 668, 688 and 698

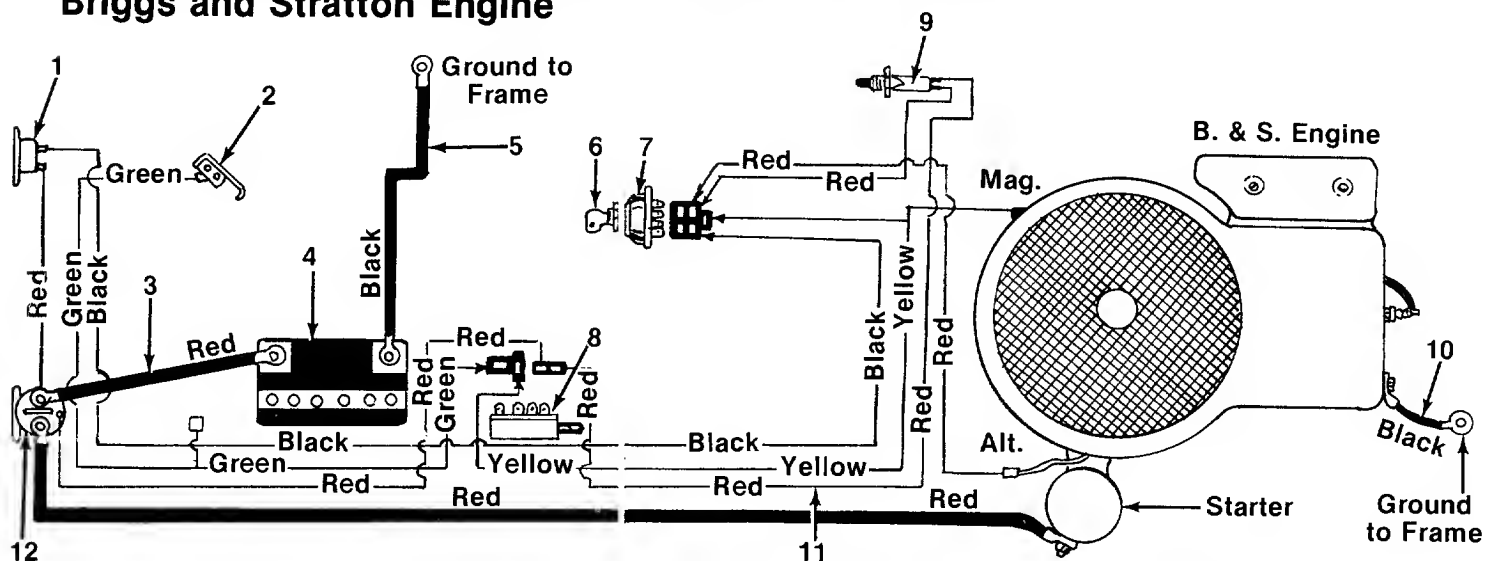
PARTS LIST FOR SINGLE SPEED TRANSAXLE 717-0750A

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART	REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	714-0129		#4 Hi-Pro Key 3/32 x 5/8" Dia.		33	736-0188		FI-Wash. .760" I.D. x 1.49" O.D.	
2	716-0115		Snap Ring .625" Shaft		34	717-0761		Lower Housing	
3	710-0854		Hex Bolt 1/4-20 x 1.75" Lg.*		35	750-0555		Spacer .53" O.D. x 3/8" Lg.	
4	710-0809		Hex Bolt 1/4-20 x 1.25" Lg.*		36	736-0329		L-Wash. 1/4" I.D.*	
5	717-0764		Upper Housing		37	710-0886		Hex Bolt 1/4-20 x 1.50" Lg. (Grade 5)	
6	710-0889		Hex FI-Bolt 1/4-20 x .88" Lg.*		38	712-0335		Castle Nut 5/16-24 Thd.*	
7	712-0287		Hex Nut 1/4-20 Thd.*		39	736-0159		FI-Wash. .344" I.D. x .875" O.D.	
8	717-0634		Input Shaft		40	717-0700		Actuating Arm—R.H.	
9	721-0178		Square Seal 5/8" I.D.		41	717-0679		Brake Yoke	
10	736-0335		Thrust Washer 5/8" I.D. x 1.25" O.D.		42	717-0682		Puck Plate	
11	717-0633		Pinion Input 14T		43	717-0678		Brake Puck	
12	716-0108		Retaining Ring 7/16" Ext.		44	717-1011		Axle L.H.	N
13	717-0758		Drive Shaft—R.H.		45	717-0677		Brake Disc	
14	741-0336		Flange Brg. 5/8" I.D. x 3/4" Lg.*		46	741-0337		Flange Bearing 5/8" I.D. x 15/16" Lg.	
15	**		FI-Wash. (See Below)		47	714-0161		Woodruff Key 3/16 x 5/8 HT	
16	717-0757		Bevel Gear 42T		48	717-0754		Shift Fork Ass'y.	
17	717-0667		Clutch Collar	N	49	741-0862		Ball Detent .250" Dia.	
18	717-1010		Miter Gear 15T		50	732-0863		Spring Detent	
19	716-0142		Snap Ring		51	714-0169		#9 Hi-Pro Key 3/16" x 3/4" Dia. HT	
20	717-0690		Thrust Bearing 1/2" I.D. x 1.0" O.D.		52	741-0335		Needle Brg. 5/8" I.D. x 1/2" Lg.	
21	710-0862		Pan Head Scr. 1/4-20 x .50" Lg. w/Patch		53	710-0855		Hex Bolt 1/4-20 x 1.00" Lg.	
22	717-1012		Axle R.H.	N	54	736-0336		FI-Wash. 5/8" I.D. x .030	
23	741-0340		Sleeve Bearing 3/4" I.D. x 1.0" Lg.		54A	736-0337		FI-Wash. 5/8" I.D. x .040	
24	721-0179		Oil Seal 3/4" I.D.		55	741-0343		Actuating Pin 5/16" Dia.	
25	741-0339		Flange Bearing 3/4" I.D. x 15/16" Lg.		56	710-0886		Hex Bolt 1/4-20 x 1.50" Lg. (Grade 5)	
26	736-0188		FI-Wash. .760" I.D. x 1.49" O.D.		57	717-0767		Differential Gear 72T Ass'y. w/Bearing	N
27	717-0673		Cross Shaft		58	717-0681		Sq. Hd. Bolt 5/16-24 Thd.	
28	717-0777		Differential Housing Ass'y.		59	1544-013		Cotter Pin 3/32" Dia. x .50" Lg.	
29	—		Comes with Ref. 28						
30	717-1009		Miter Gear	N					
31	712-0200		Hex Ins. L-Nut 1/2-20 Thd.			737-0148		Grease—Shell (10 oz.)	

**Ref. No. 15 736-0349 FI-Wash. 5/8" I.D. x 1.0" O.D. x .020 Thk.
 736-0336 FI-Wash. 5/8" I.D. x 1.0" O.D. x .030 Thk.
 736-0337 FI-Wash. 5/8" I.D. x 1.0" O.D. x .040 Thk.

Models 618 and 668 (without headlights)

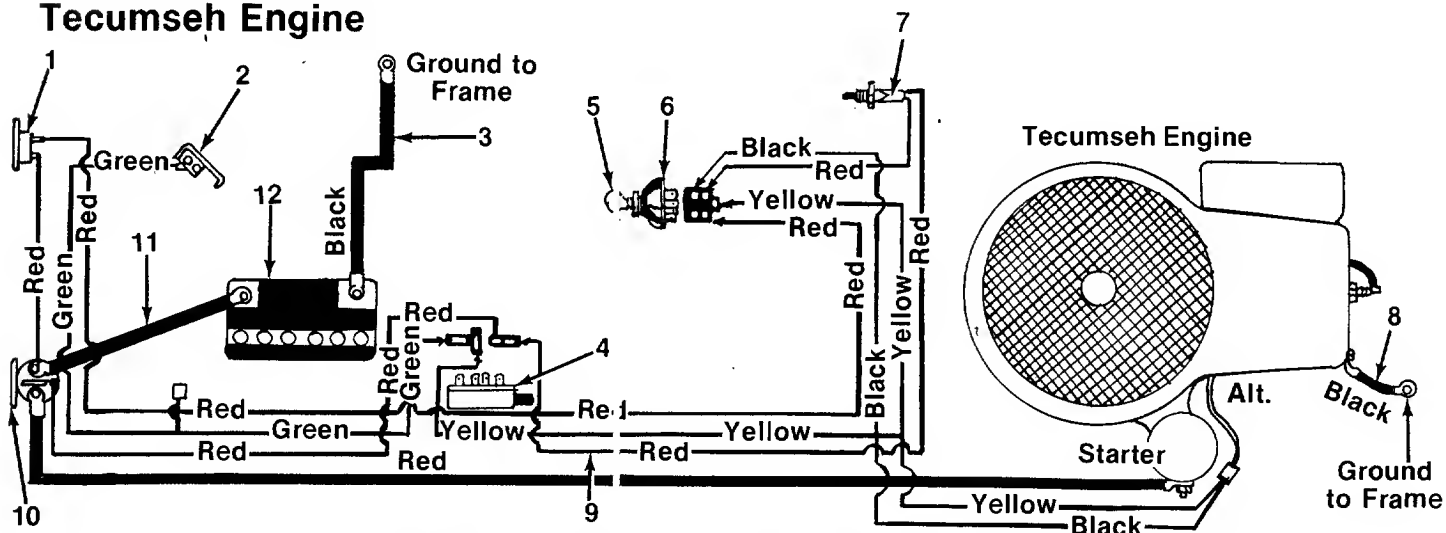
Briggs and Stratton Engine



PARTS LIST FOR ELECTRICAL SYSTEM— BRIGGS AND STRATTON ENGINE

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
1	725-0459	Circuit Breaker	7	725-0267	Ignition Switch
2	725-0759	Reverse Safety Switch	8	725-0803	Safety Switch (P.T.O.)
3	725-0926	Electric Wire w/Boot (Positive)	9	725-0268	Safety Switch (Clutch)
4	725-0514	12V-Battery	10	725-0976	Ground Wire 7.25" Lg. (Engine)
5	725-0975	Ground Wire 9.0" Lg. (Negative)	11	725-0948	Wire Harness
6	725-0201	Ignition Key	12	725-0771	Solenoid

Tecumseh Engine

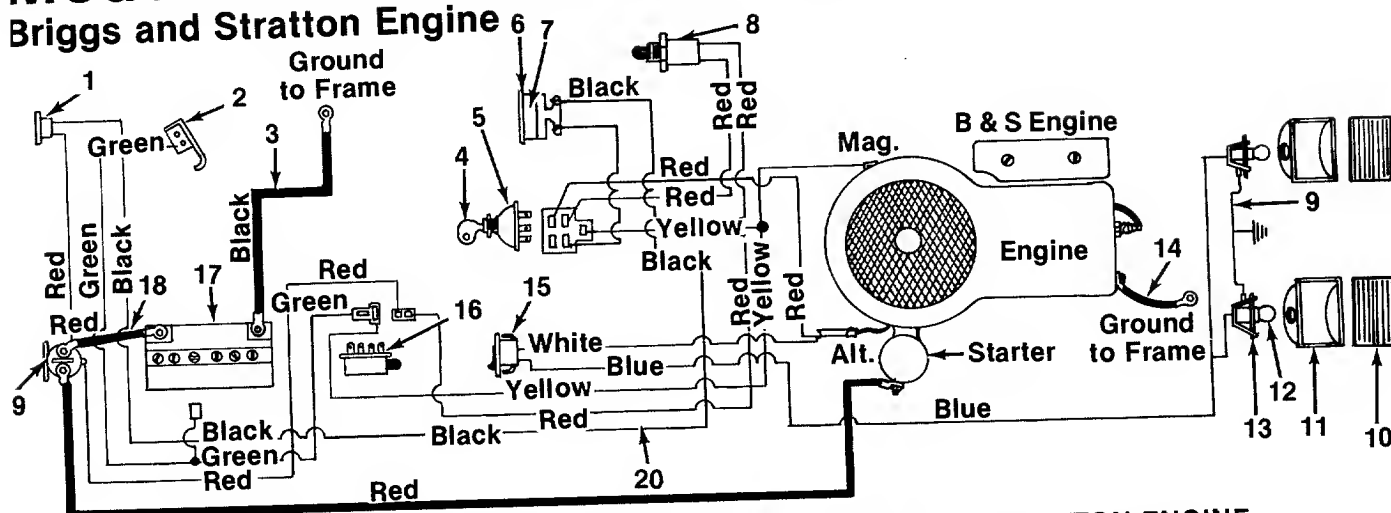


PARTS LIST FOR ELECTRICAL SYSTEM— TECUMSEH ENGINE

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
1	725-0459	Circuit Breaker	8	725-0976	Ground Wire 7.25" Lg. (Black)
2	725-0759	Spring Switch (Reverse)	9	725-0968	Wire Harness
3	725-0975	Ground Wire 9.0" Lg. (Negative—Black)	10	725-0771	Solenoid
4	725-0803	Safety Switch (P.T.O.)	11	725-0926	Electric Wire w/Boot (Positive—Red)
5	725-0102	Ignition Key	12	725-0514	12V-Battery
6	725-0267	Ignition Switch			
7	725-0268	Safety Switch (Clutch)			

Models 618 and 668 (with headlights)

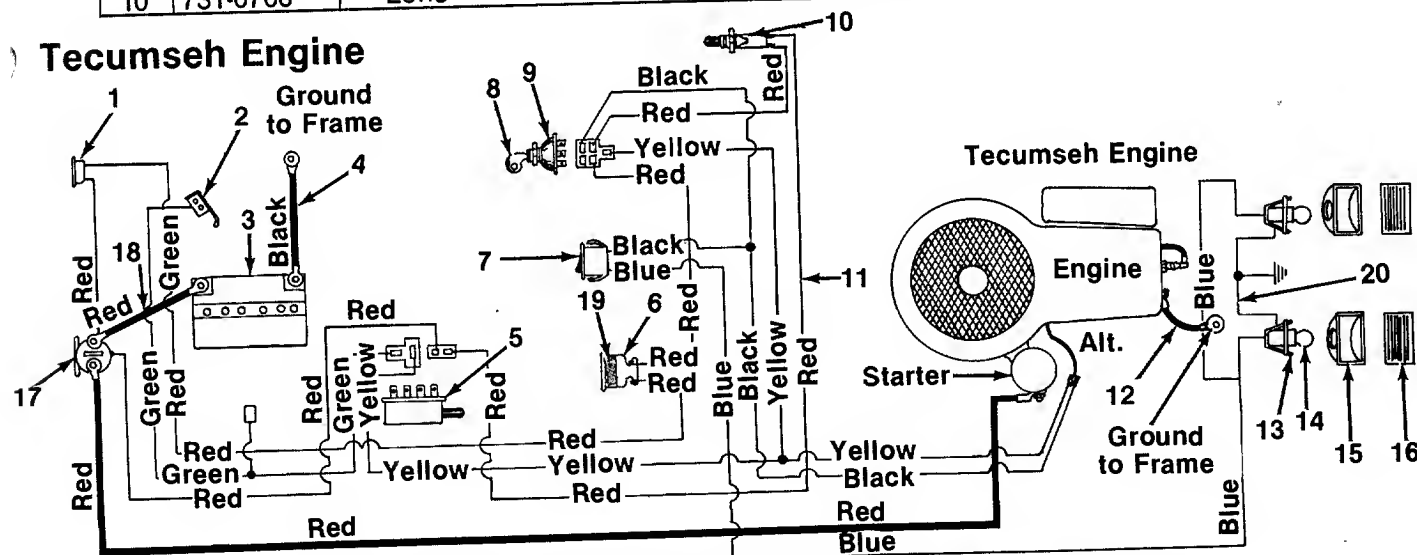
Briggs and Stratton Engine



PARTS LIST FOR ELECTRICAL SYSTEM— BRIGGS AND STRATTON ENGINE

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
1	725-0459	Circuit Breaker	11	731-0705	Headlight Housing
2	725-0759	Spring-Switch—Reverse	12	725-0963	Lamp
3	725-0975	Ground Wire 9.0" Lg.	13	725-1058	Socket
4	725-0201	Ignition Key	14	725-0976	Ground Wire 7.25" Lg.
5	725-0267	Ignition Switch	15	725-0634	Light Switch
6	725-0925	Ammeter	16	725-0803	Safety Switch
7	722-0135	Foam Strip	17	725-0514	Battery
8	725-0268	Safety Switch	18	725-0926	Electric Wire w/Boot
9	725-0916	Ground Wire	19	725-0771	Solenoid
10	731-0706	Lens	20	725-0945	Wire Harness

Tecumseh Engine

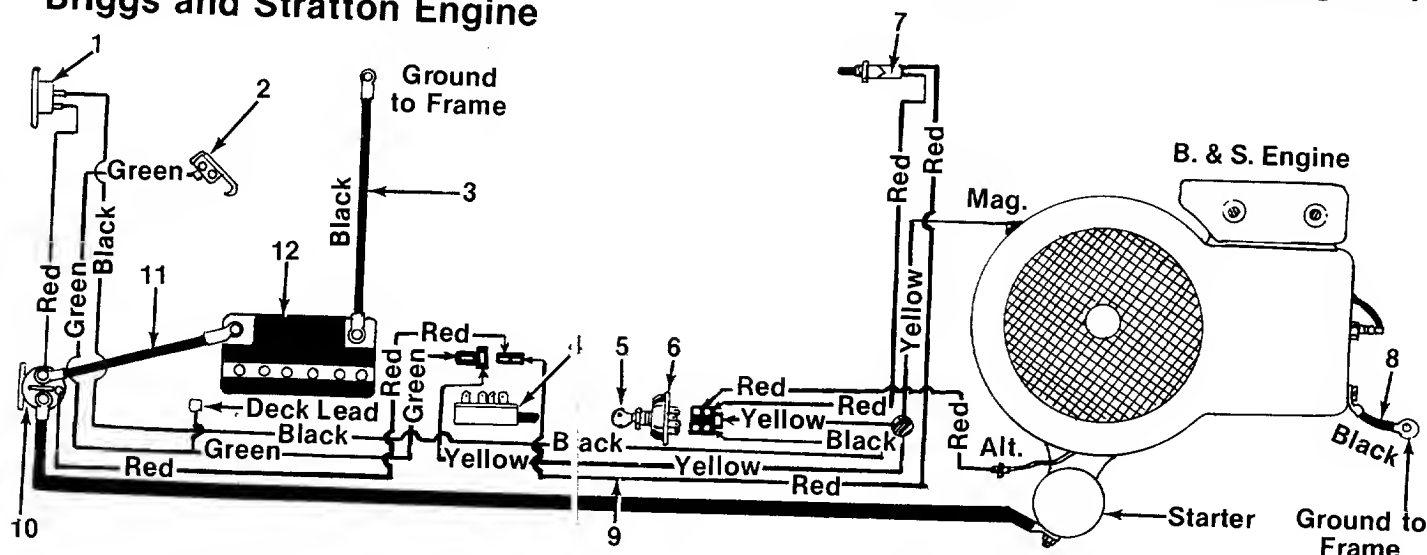


PARTS LIST FOR ELECTRICAL SYSTEM— TECUMSEH ENGINE

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
1	725-0459	Circuit Breaker	11	725-1062	Wire Harness
2	725-0759	Spring Switch (Reverse)	12	725-0976	Ground Wire 7.25" Lg.
3	725-0514	Battery	13	725-1058	Twist Lock Lamp Socket
4	725-0975	Ground Wire 9.0" Lg.	14	725-0963	Lamp
5	725-0803	Safety Switch	15	731-0705	Headlight Housing
6	725-0925	Ammeter	16	731-0706	Lens
7	725-0634	Light Switch	17	725-0771	Solenoid
8	725-0201	Ignition Key	18	725-0926	Electric Wire w/Boot
9	725-0267	Ignition Switch	19	722-0135	Foam Strip
10	725-0268	Safety Switch	20	725-0916	Ground Wire

Models 620, 638, 688 and 698 (without headlights)

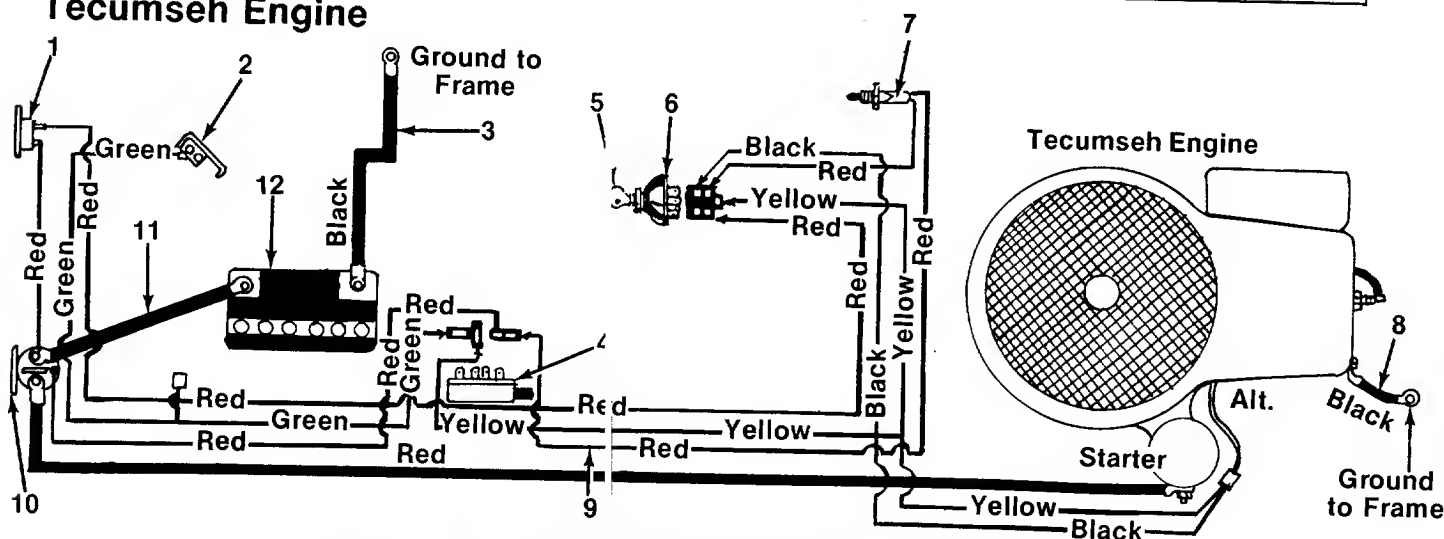
Briggs and Stratton Engine



PARTS LIST FOR ELECTRICAL SYSTEM— BRIGGS AND STRATTON ENGINE

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
1	725-0459	Circuit Breaker	8	725-0976	Ground Wire 7.25" Lg. (Engine—Black)
2	725-0759	Spring Switch (Reverse)	9	725-0937	Wire Harness
3	725-0975	Ground Wire 9.0" Lg. (Negative—Black)	10	725-0771	Solenoid
4	725-0803	Safety Switch (P.T.C.)	11	725-0927	Electric Wire w/Boot (Positive—Red)
5	725-0201	Ignition Key	12	725-0514	12V-Battery
6	725-0267	Ignition Switch			
7	725-0268	Safety Switch (Clutch)			

Tecumseh Engine

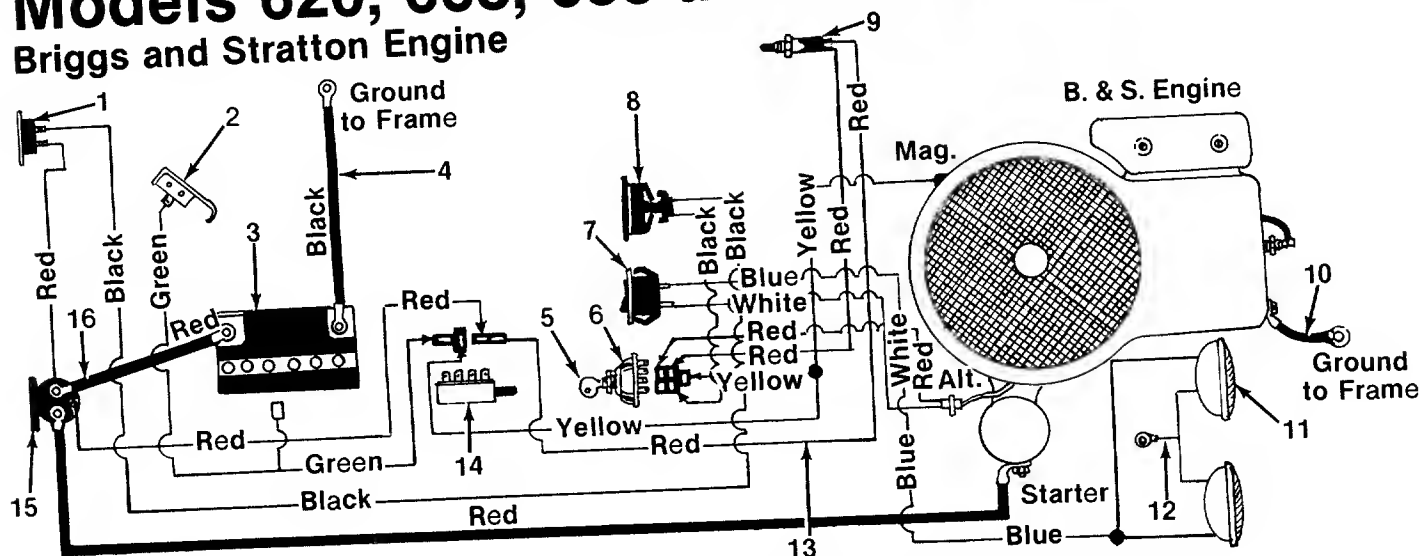


PARTS LIST FOR ELECTRICAL SYSTEM— TECUMSEH ENGINE

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
1	725-0459	Circuit Breaker	8	725-0976	Ground Wire 7.25" Lg. (Black)
2	725-0759	Spring Switch (Reverse)	9	725-0968	Wire Harness
3	725-0975	Ground Wire 9.0" Lg. (Negative—Black)	10	725-0771	Solenoid
4	725-0803	Safety Switch (P.T.C.)	11	725-0926	Electric Wire w/Boot (Positive—Red)
5	725-0102	Ignition Key	12	725-0514	12V-Battery
6	725-0267	Ignition Switch			
7	725-0268	Safety Switch (Clutch)			

Models 620, 638, 688 and 698 (with headlights)

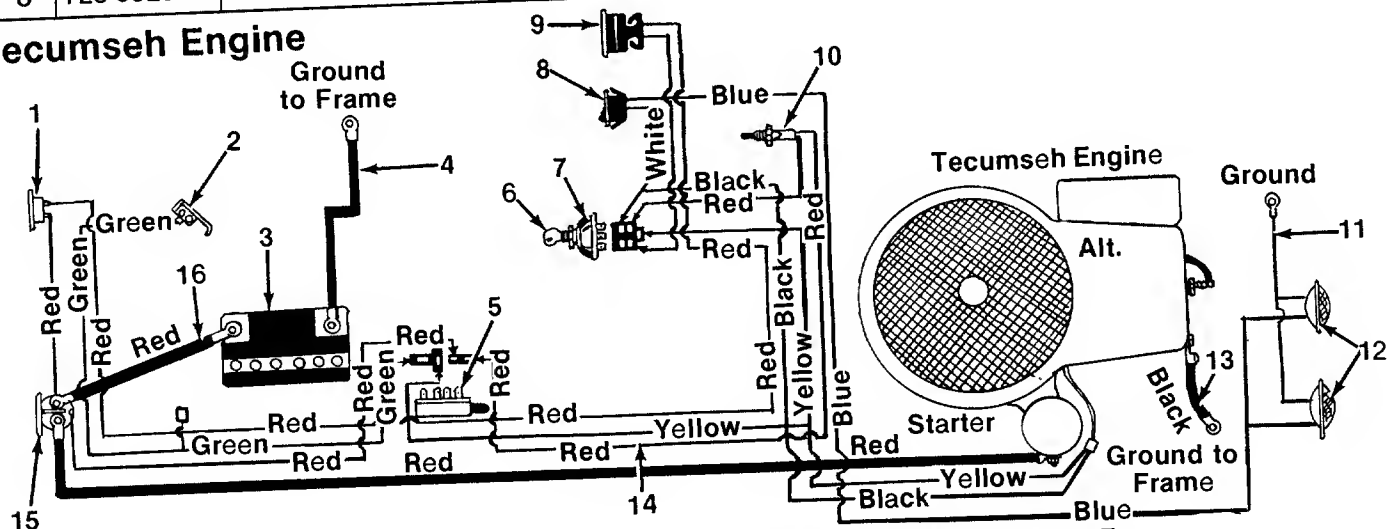
Briggs and Stratton Engine



PARTS LIST FOR ELECTRICAL SYSTEM—BRIGGS AND STRATTON ENGINE

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
1	725-0459	Circuit Breaker	9	725-0268	Safety Switch (Clutch)
2	725-0759	Spring Switch (Reverse Safety)	10	725-0976	Ground Wire 7.25" Lg. (Black—Engine)
3	725-0514	12V-Battery	11	725-0222	Headlight
4	725-0975	Grounding Wire 9.0" Lg. (Black—Negative)	12	725-0916	Ground Wire (Headlight)
5	725-0201	Ignition Key	13	725-0939	Wire Harness
6	725-0267	Ignition Switch	14	725-0803	Safety Switch (P.T.O.)
7	725-0634	Headlight Switch	15	725-0771	Solenoid
8	725-0925	Ammeter	16	725-0926	Electric Wire w/Boot (Red—Positive)

Tecumseh Engine



PARTS LIST FOR ELECTRICAL SYSTEM—TECUMSEH ENGINE

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
1	725-0459	Circuit Breaker	10	725-0268	Safety Switch (Clutch)
2	725-0759	Spring Switch (Reverse)	11	725-0916	Ground Wire (Headlights)
3	725-0514	12V-Battery	12	725-0222	Headlights
4	725-0975	Ground Wire 9.0" Lg. (Negative—Black)	13	725-0976	Ground Wire 7.25" Lg. (Black)
5	725-0803	Safety Switch (P.T.O.)	14	725-1035	Wire Harness
6	725-0201	Ignition Key	15	725-0771	Solenoid
7	725-0267	Ignition Switch	16	725-0926	Electric Wire w/Boot (Positive—Red)
8	725-0634	Light Switch			
9	725-0925	Ammeter			

PARTS INFORMATION

POWER EQUIPMENT PARTS AND SERVICE

Parts and service are available through the authorized service firms listed below. All orders should specify the model number of your unit, part numbers, description of parts and the quantity of each part required.

NOTE: If any parts are found to be missing or defective upon assembly of this unit, write to advise the factory so that immediate replacement can be made.

ALABAMA Auto Electric & Carburetor Co.	BIRMINGHAM 2625 4th Ave. S. 35233
ARKANSAS Sutton's Lawn Mower Shop	NORTH LITTLE ROCK 5301 Roundtop Drive Box 368, Rt. 4 72117
CALIFORNIA Billious	PORTERVILLE 75 North D Street 93257
COLORADO Spitzer Industrial Products Co.	DENVER 6601 N. Washington St. 80229
FLORIDA Radco Distributors	JACKSONVILLE 4909 Victor St. Box 5459 32207
Small Eng. Dist.	HIALEAH 7995 W. 26th Court 33016
GEORGIA East Point Cycle & Key Inc.	EAST POINT 2834 Church St. 30344
ILLINOIS Keen Edge Co.	LYONS 8615 Ogden Ave. 60534
INDIANA Parts & Sales Inc.	ELKHART 2101 Industrial Pkwy. 46516
IOWA Power Lawn & Garden Equip.	DUBUQUE 2551 J.F. Kennedy 52001
LOUISIANA Suhren Engine Co.	NEW ORLEANS 8330 Earhart Blvd. 70118
MARYLAND Center Supply Co.	TAKOMA PARK 6867 New Hampshire Ave. 20912
MASSACHUSETTS Morton B. Collins Co.	SPRINGFIELD 300 Birnie Ave. 01107
MICHIGAN Lorenz Service Co.	LANSING 2500 S. Pennsylvania. 48910
Power Equipment Dist.	MOUNT CLEMENS 340 Hubbard 48043
MINNESOTA Hance Distributing Inc.	HOPKINS 420 Excelsior Ave. W. 55343
MISSISSIPPI Biloxi Sales & Service, Inc.	BILOXI 506 Caillavet St. 39533
MISSOURI Automotive Equip. Service	KANSAS CITY 3117 Holmes St. 64109
Ross-Frazer Supply Co.	ST. JOSEPH 8th and Monterey 64503
Henzler, Inc.	ST. LOUIS 2015 Lemay Ferry Rd. 63125
NEW JERSEY Lawnmower Parts Inc.	BELLMAWR 717 Creek Rd. 08030
NEW MEXICO Spitzer Eng. & Parts Co.	ALBUQUERQUE 1023 Third Ave. N.W. 87103
NEW YORK Gamble Dist., Inc.	CARTHAGE West End Ave. 3619

BRIGGS AND STRATTON, TECUMSEH AND PEERLESS PARTS AND SERVICE

Briggs & Stratton, Tecumseh and Peerless parts and service should be handled by your nearest authorized engine service firm. Check the yellow pages of your telephone directory under the listing **Engines—Gasoline**, Briggs & Stratton or Tecumseh Lauson.

OHIO Stebe's Mid-State Mower Supply	CARROLL Box 366, 71 High St. 43112
Bleckrie, Inc.	CLEVELAND 7900 Lorain Ave. 44102
National Central	WADSWORTH 687 Seville Rd. 44281
Burton Supply Co.	YOUNGSTOWN 1301 Logan Ave. Box 929 44501
OKLAHOMA Victory Motors, Inc.	MUSKOGEE 605 S. Cherokee 74401
OREGON Kenton Supply Co.	PORTLAND 8216 N. Denver Ave. 97217
PENNSYLVANIA EECO Inc.	HARRISBURG 4021 N. 6th St. 17110
Thompson Rubber Co.	PHILADELPHIA 5222-24 N. Fifth St. 19120
Bluemont Co.	PITTSBURGH 11125 Frankstown Rd. 15235
Frank Roberts & Sons	PUNXSUTAWNEY R.D. 2 15767
Scranton Auto Ignition Co.	SCRANTON 1133-35 Wyoming Ave. 18509
TENNESSEE Master Repair Service	KNOXVILLE 2000 Western Ave. 37921
American Sales & Service, Inc.	MEMPHIS 3035-43 Bellbrook 38116
TEXAS Marr Brothers, Inc.	DALLAS 423 E. Jefferson 7520
Woodson Sales Corp.	FORT WORTH 6733 Baker Blvd. Hwy. 10 76118
Bullard Supply Co.	HOUSTON 2409 Commerce St. 77003
Engine House Inc.	SAN ANTONIO 8610 Botts Lane P.O. Box 17867 78217
UTAH Powered Products	BOUNTIFUL 485 N 500 W. 84010
VIRGINIA RBI Corp.	ASHLAND 101 Cedar Ridge Dr. 23005
WASHINGTON Equip. Northwest	SEATTLE 1410 14th Ave. 98122
WISCONSIN Horst Dist. Inc.	CHILTON 444 N. Madison St. 53014
NORTH CAROLINA Smith Hardware Co.	GOLDSBORO 515 N. George St. 27530
Dixie Sales Company	GREENSBORO 335 N. Green 27402

WARRANTY PARTS AND SERVICE POLICY

(0484)

The purpose of warranty is to protect the customer from defects in workmanship and materials, defects which are NOT detected at the time of manufacture. It does not provide for the unlimited and unrestricted replacement of parts. Use and maintenance are the responsibility of the customer. The manufacturer cannot assume responsibility for conditions over which it has no control. Simply put, if it's the manufacturer's fault, it's the manufacturer's responsibility; if it's the customer's fault, it's the customer's responsibility.

CLAIMS AGAINST THE MANUFACTURER'S WARRANTY INCLUDES:

1. Replacement of Missing Parts on new equipment.
2. Replacement of Defective Parts within the warranty period.
3. Repair of Defects within the warranty period.

All claims MUST be substantiated with the following information:

1. Model Number of unit involved.
2. Date unit was purchased or first put into service.
3. Date of failure.
4. Nature of failure.

MTD PRODUCTS INC • P.O. BOX 36900 • CLEVELAND, OHIO 44136